



Ship Material Condition Metrics Model

Maintenance **F**igure **O**f **M**erit (**MFOM**) 2.0



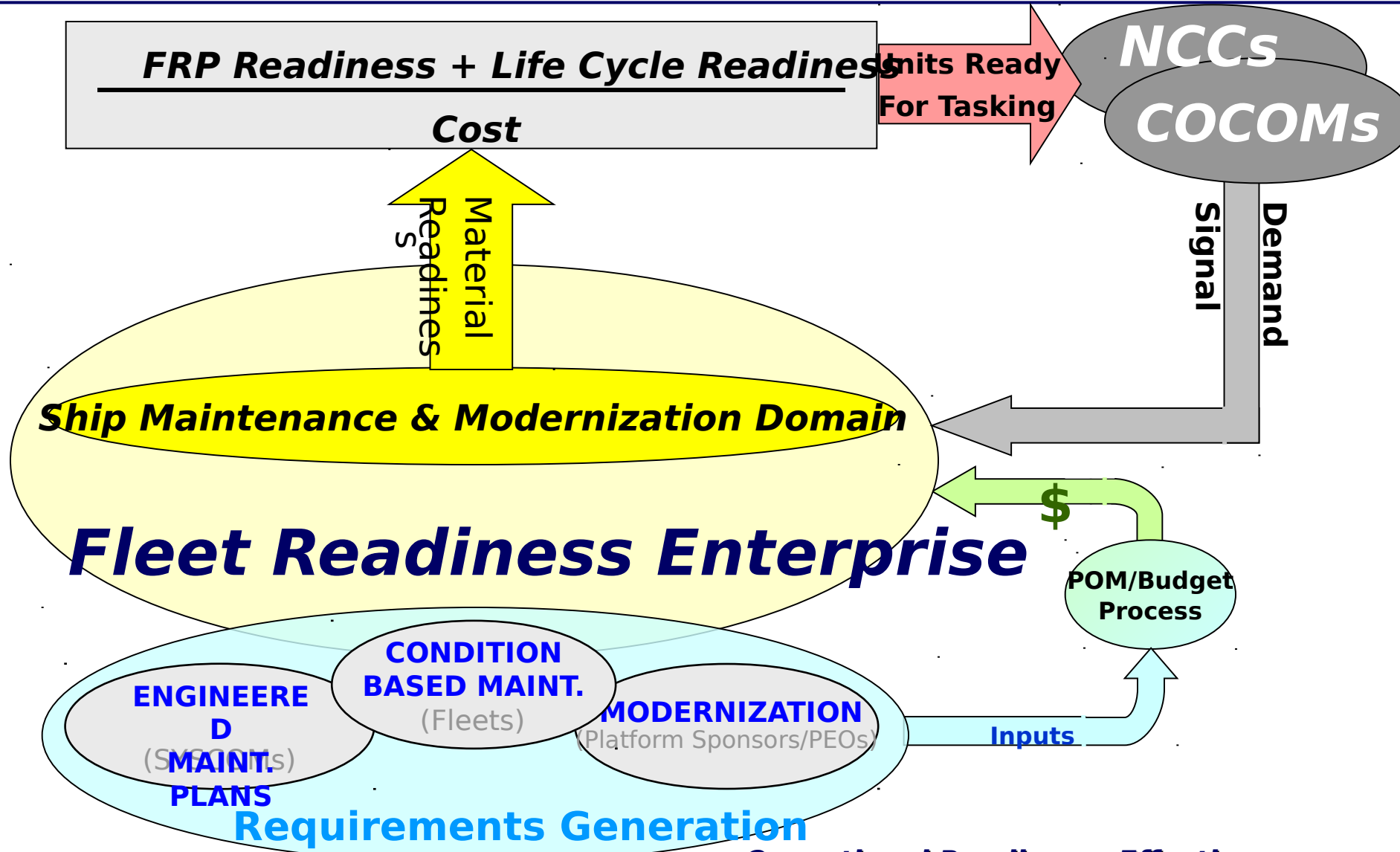
Approved by Mr. Dale Hirschman
MFOM PM, USFF N434

3 October 2007

OSD Brief



Today's Maintenance Strategy





How does MFOM help?

MFOM 2.0 Provides 3 Significant Tools

- **Material Readiness Reporting Tool for Ship Systems**
 - MFOM calculates and reports a percentage of readiness for shipboard equipment and systems based on the documented material condition
 - MFOM uses standard material reporting tools
- **Screening Value for Maintenance Actions**
 - MFOM provides each maintenance action a numerical value based on the Equipment Operating Capability (EOC) and system impact
 - This allows for the prioritization of maintenance actions based on their contribution to material readiness
- **Material Readiness - Resources Tool**
 - MFOM identifies the funding required to reach a certain level of material readiness based on the documented material condition



Basics of MFOM

- **MFOM 2.0 is a computer based tool built on a hierarchical structure that calculates against operational requirements**
- **Designed to consistently and objectively calculate a material condition readiness value for equipment, systems, tasks, missions or the ship.**
 - **MFOM resides on the classified and unclassified networks both ashore and afloat**
 - **MFOM is accessed through any internet connection**
 - **MFOM is modeled based on input from operational and technical Subject Matter Experts**
 - **MFOM takes into account redundancy and system interdependency**

**Near real time reporting of ship's material
condition to support maintenance
planning
and operational readiness reporting
(supports DRRS-N)**



MFOM Data Inputs

- ❑ **MFOM takes input from existing documentation**
 - **Automated Work Requests (i.e., 2 Kilos)**
 - **Inspections, Certifications, Assessments and Visits (ICAVs)**
 - **Alterations**
 - **Repair work**
 - **CASREPs, etc**
 - **Tag-outs (eSOMS)**
 - **Machinery Monitoring Systems (e.g., ICAS)**
 - **IPARS**
 - **Class Maintenance Plans**
 - **Other Technical Documentation (DFS, UROs, IMMPS, Master Spec Catalog, MRCs)**
- ❑ **MFOM starts with existing ship's configuration data**
 - **All records for each hull from CDMD-OA**



Building the Model

A Coordinated Group Effort

• 40 Government Activities

Fleet Forces Command	CNSF, CNAF, CSF	SUBMEPP
NSWCCD-SSES Philadelphia	NUWC Newport	SPAWAR San Diego
NSWC Crane	NSWC Louisville	SPAWAR Charleston
NSWC Port Hueneme	NAVAIR	SPAWAR Chesapeake
NSWC Corona	NSWC Earle	SUPSHIP Bath
NSWC Indian Head	Port Engineers	SUPSHIP Newport News
NSWC Dahlgren	PEO Ships, Sub, & Carriers	SUPSHIP Pascagoula
NAWC Lakehurst	Norfolk Naval Shipyard	NAVSEA
NSWC Panama City	(LHA/LHD)	NETWARCOM
Carrier Planning Activity	Puget Sound Naval Shipyard	AIS Center Norfolk
NSLC Mechanicsburg	(MCM)	NAVSUP
Center for Naval Analysis	Boston Detachment	OPNAV N81/N43
COMFISCS	(FFG, LSD, LPD)	Office of Naval Research
Office of Secretary of Defense	Navy ERP	INSURV
(AT&L)		MARMC

• 18 Contractors

CDI	Northrop Grumman Newport News	Lockheed Martin	Tech Assist
MANTECH	Northrop Grumman Pascagoula (CG)	Booze Allen Hamilton	General Dynamics
CSC	Bath Iron Works (DDG)	Antech Systems	SAIC
CACI	MI Technical Solutions	Romulus	
EG&G	UNISYS	L3 Comm	

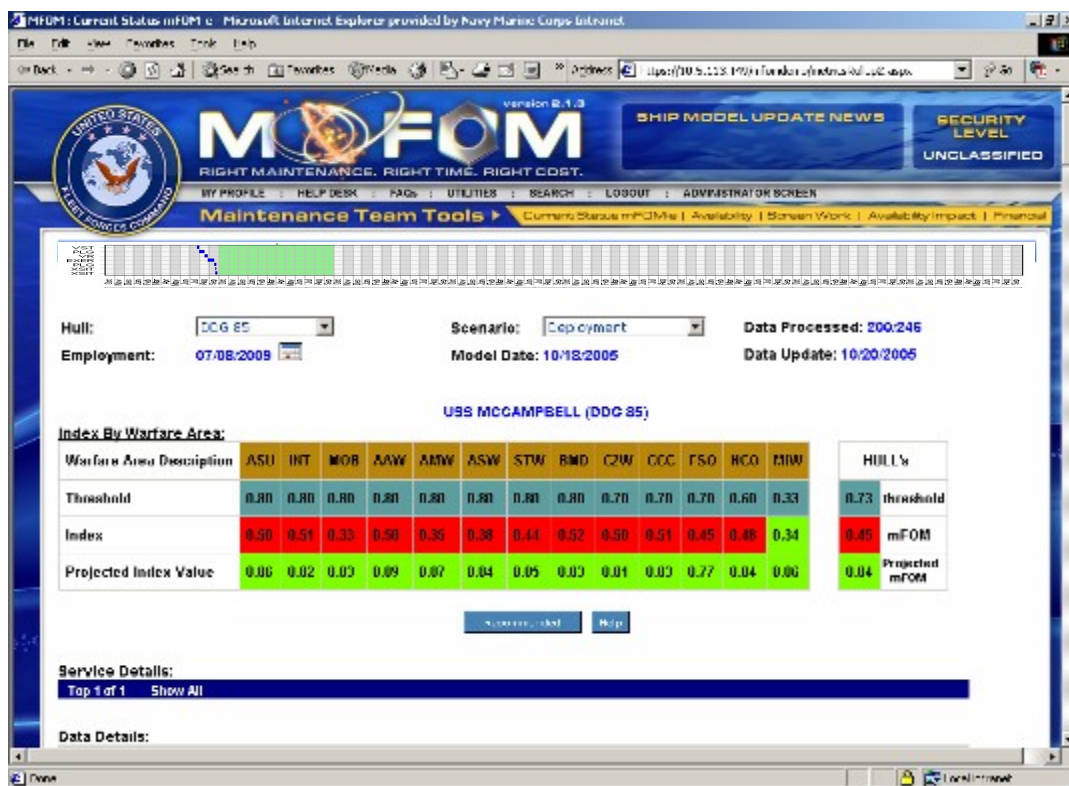


Status

- **Shipboard Implementation**
 - Expanded on DRRS-N software rollout schedule
 - Installed on BATAAN ESG, ENTERPRISE CSG and NIMITZ CSG, GEORGE WASHINGTON, JACKSONVILLE and others (24 ships)
 - Plan to have 50 ships by Dec 31 and all ships within 15 months
- **Shore Implementation**
 - **Classified**
 - West coast production servers up for surface ships and subs/carriers
 - 214 ships reporting to DRRS-N
 - 214 ships reporting material condition in MFOM
 - All surface ships are generation 2 models on production - reporting to DRRS-N
 - All SSN 688's on production - reporting to DRRS-N
 - All carriers on production - reporting to DRRS-N
 - No U-NNPI is displayed
 - **Unclassified**
 - West coast production servers up for surface ships and subs/carriers
 - NSWC Crane has distance support sites up
- **Next Developments**
 - ATM (Phase I - October 2007- delivers this week)
 - IUID (Pilot ship USS FORREST SHERMAN DDG-98 Completes October 2007)
 - Fleet Assessment Tool (Completes October 2007 - delivered)
 - NNWC modeling of shore facilities (Completes November 2007)
 - Validation, Screening & Brokering (Completes March 2008)



Ship's Material Condition Readiness



Data Details:

ASU	INT	MOB	AAW	AMW	ASW	STW	BMD	C2W	CCC	FSO	NCO	MIW
WAR	LINKED/ LIKE WORK	EFFECT	WCS/JSN	EOC	NARRATIVE	AVAIL	REPAIR ACTIVITY	REC	mFOM	Inc	Exc	
ASU	166	0.61	EM020441	0.3		A123	Y	0				
ASU	163	0.66	EM020439	0.0	REMOVE AND REPLACE C SUMP	A123	Y	11.04				
ASU	167	0.78	PE040012	0.6	PROVIDE WAREHOUSE	A123	Y	41.10				
ASU	164	1.0	CF020267	0.0	TAO VDDS MONITOR FAILURE		N	52.58				
ASU	165	0.67	CM020226	0.0	BAD MO DRIVE		Y	61.19				
ASU	130	0.89	EM020393	0.8	CORRODED DRIP PAN		Y	75.90				
ASU	62	0.92	EM020426	0.8	HOPM FLOW METERS OUT OF CAL		Y	79.24				
ASU	20	0.80	CG030076	0.0	NIGHT VISION HAS BROKEN KNOB		Y	81.13				
ASU	119	0.91	OT020072	0.8	MOVE DCC CUT-OUT SWITCH		Y	82.25				
ASU	42	0.87	CM020187	0.0	BAD POWER SUPPLY IN MCP		Y	84.47				
ASU	42	0.87	CM020207	0.6	FUSES		Y	84.47				
ASU	43	0.87	CM020195	0.0	DAMAGED DELUGE HOSE		Y	84.47				
ASU	43	0.87	CM020196	0.0	DAMAGED DELUGE HOSE		Y	84.47				
ASU	43	0.87	CM020197	0.0	DAMAGED DELUGE HOSE		Y	84.47				
ASU	44	0.87	CM020188	0.0	BAD POWER SUPPLY IN MCP		Y	84.47				
ASU	71	0.87	CM020234	0.0	TRANSFORMERS		Y	84.47				
ASU	135	0.87	CM020222	0.0	DAMAGED W29 CABLE ASSEMBLY		Y	84.47				
ASU	135	0.87	CM020192	0.6	DAMAGED DELUGE HOSE		Y	84.47				
ASU	141	0.87	CM020228	0.0	DAMAGED T3 AND T4 ON A3		Y	84.47				
ASU	144	0.87	CM020233	0.0	TRANSFORMERS		Y	84.47				
ASU	139	0.97	CM020224	0.8	IMA PERFORM 7211 R-26		N	84.47				
ASU	140	0.97	CM020227	0.8	IMA PERFORM 7211 R-26		N	84.47				
ASU	121	0.93	EM010350	0.6	PUMP CALIBRATION REQUIRED	B123	Y	85.54				
ASU	124	0.93	EM010352	0.8	POST DEPLOYMENT INSPECTION	B123	Y	85.54				
ASU	123	0.94	EM010351	0.6	CALIBRATION REQUIRED FOR GAGES	B123	N	86.51				
ASU	126	0.96	EM040181	0.0	STRIPPED VALVE STEM	B123	N	89.47				
ASU	1	0.94	CI020324	0.0		B123	N	89.66				
ASU	1	0.94	CI020325	0.0	NO COMMS ON SIWCS RADIO	B123	N	89.66				
ASU	1	0.94	CSE10006	0.0	NO COMMS ON SIWCS RADIO	B123	N	89.66				
ASU	1	0.94	CI020322	0.0	NO COMMS ON SIWCS RADIO	B123	N	89.66				
ASU	1	0.94	CSE10007	0.0	LOSS OF COMMS ON SIWCS RADIO	B123	N	89.66				
ASU	1	0.94	CSE10008	0.0	NO COMMS ON SIWCS RADIO	B123	N	89.66				
ASU	1	0.94	CI020323	0.0	NO COMMS ON SIWCS RADIOS	B123	N	89.66				
ASU	1	0.94	CSE10009	0.0	NO COMMS ON SIWCS RADIO	B123	N	89.66				
ASU	1	0.94	CSE10010	0.0	NO COMMS ON SIWCS RADIO	B123	N	89.66				
ASU	90	0.90	EM010349	0.0	FAULTY DISCRET OUTPUT CARD		Y	90.53				
ASU	138	0.95	CSE10030	0.0	FAULTY SYNTHESIZER ON RCVR 2		N	90.80				
ASU	6	0.99	OI01R012	0.0	MISSING RED LIGHT AND PLACARD		N	91.47				
ASU	125	0.97	EM010354	0.8	CORROSION CONTROL REQUIRED		N	91.99				
ASU	45	0.97	EM020394	0.8	CORROSION CONTROL DOOR 2-262-2		N	92.04				
ASU	132	0.93	CF020268	0.0	XSTAB 10 POWER FAILURE		N	92.24				
ASU	74	0.96	CSE10004	0.0	BIT TEST FAILURE ON USC-55		N	92.34				

New Readiness Values indicated after repairs are made

Software indicates which items should be repaired to support the next mission



Feeding Readiness Metrics

Total Force Integrated Readiness Model

Defense Readiness Reporting System-Navy

DRRS-N Screen



DRRS Screen



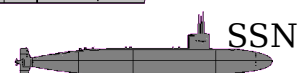
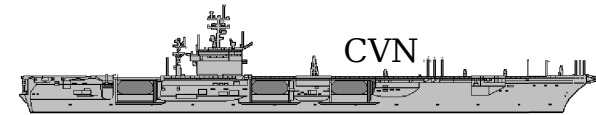
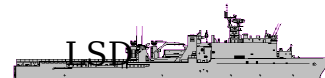
P E S T O

NTAs

- Track air targets
- Move units

MFOM


MRAS





Strike Group Page

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MFOM

RIGHT MAINTENANCE. RIGHT TIME. RIGHT COST.

MY PROFILE : HELP DESK : FAQs : UTILITIES : SEARCH : LOGOUT : ADMINISTRATOR SCREEN

Fleet Maintenance Officer Tools ▶ Dashboard | Parameters

SHIP MODEL UPDATE NEWS

SECURITY LEVEL
UNCLASSIFIED

9/11/2007

Strike Group Dashboard

BONHOMME RICHARD

✖ BASIC U

INT GROUP TRNG

DEPLOY

SUSTAINMENT

MAINTENANCE

Deployment Date: 31 Jul 2007

Threshold	MFOM
1.00	0.74

	Current MFOM	Projected MFOM	Total Mandays
USS MCCAMPBELL - DDG 85	0.61	0.46	244
USS SHOUP - DDG 86	0.86	1.00	13

KEARSARGE

✖ BASIC U

INT GROUP TRNG


DEPLOY

SUSTAINMENT

MAINTENANCE

Deployment Date: 31 Aug 2007


Threshold	MFOM
1.00	0.82



VZAccess Manager

Microsoft PowerPoint ...

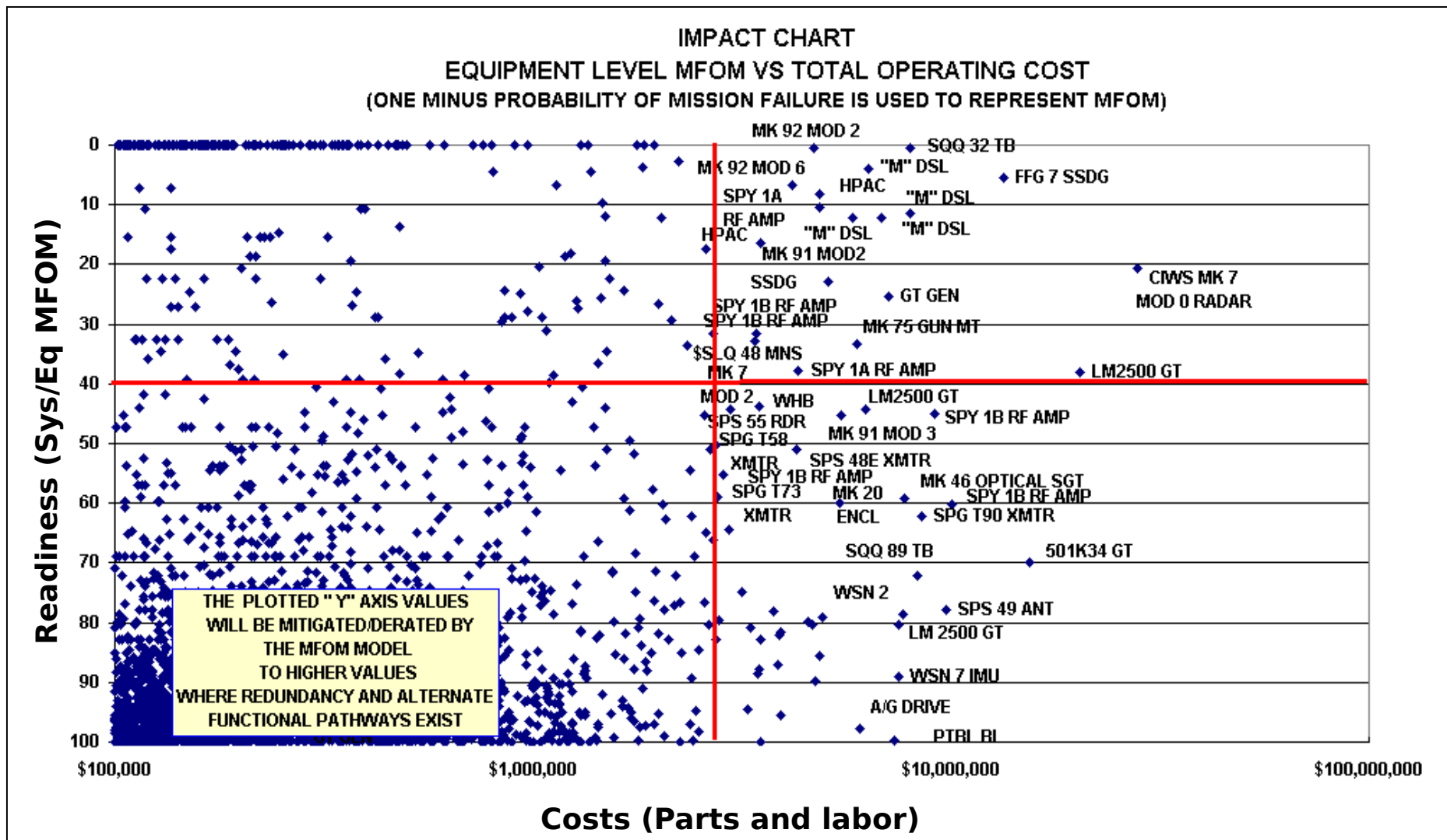
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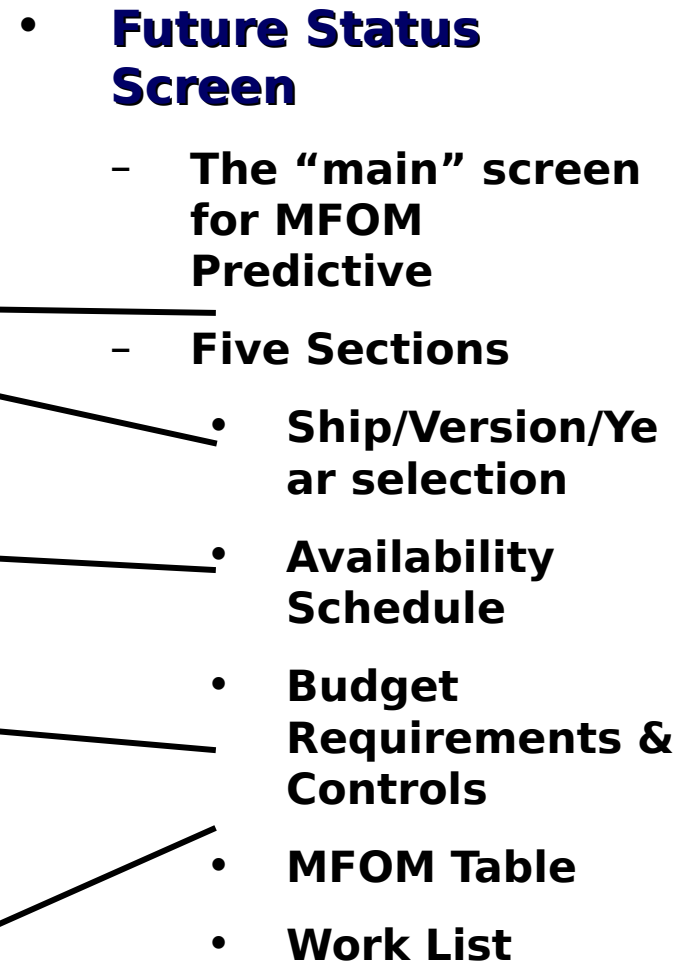


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TMA/TMI Data Analysis



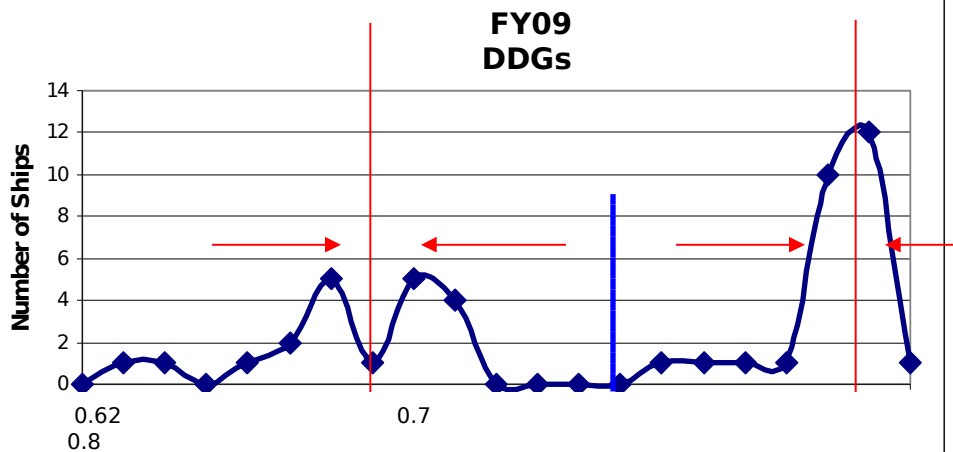




MFOM Predictive Output Data

Class Summary of Readiness Values, Man-days and Material Costs

Individual Hull Build-up of Readiness Values, Man-days and Material Costs



Class Summary

Fiscal Year	2007	2008	2009	2010	2011	2012	2013	2014
Hull Threshold	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Predictive MFOM	0.88	0.86	0.86	0.85	0.86	0.85	0.86	0.85
Rec MFOM	0.93	0.93	0.91	0.92	0.92	0.92	0.91	0.92
Funded MFOM	0.93	0.93	0.91	0.92	0.92	0.92	0.91	0.92
Recommended	180,700.00 K\$	244,475.75 K\$	172,578.23 K\$	205,824.96 K\$	202,944.87 K\$	211,641.41 K\$	160,957.74 K\$	228,623.57 K\$
Funded	180,700.00 K\$	244,433.47 K\$	172,578.23 K\$	197,973.86 K\$	202,944.87 K\$	211,723.70 K\$	160,957.74 K\$	228,623.57 K\$

Hull Breakdown

DDG 51: USS ARLEIGH BURKE								
Fiscal Year	2007	2008	2009	2010	2011	2012	2013	2014
Scenario	Deployment	Post Avail	Deployment	Deployment	Post Avail	Deployment	Post Avail	Deployment
Hull Threshold	0.8	0.62	0.8	0.8	0.62	0.8	0.62	0.8
Predictive MFOM	0.87	0.85	0.88	0.84	0.84	0.89	0.84	0.89
Rec MFOM	0.87	0.98	0.88	0.84	0.98	0.89	0.98	0.89
Funded MFOM	0.87	0.99	0.95	0.86	0.98	0.89	0.98	0.89
Recommended	0.00 K\$	8,306.04 K\$	0.00 K\$	0.00 K\$	8,954.75 K\$	0.00 K\$	8,197.19 K\$	0.00 K\$
Funded	0.00 K\$	8,308.42 K\$	41.42 K\$	0.00 K\$	8,954.75 K\$	0.00 K\$	8,197.19 K\$	0.00 K\$
Avail		SRA			DSRA		SRA	
Items		219	44		224		211	
Mdays		15384.85	82.85		16119		15049	
Material		1,628.97 K\$	0		1,883.10 K\$		1,594.97 K\$	
Total		8,309.42 K\$	41.42		8,954.75 K\$		8,197.19 K\$	

DDG 52: USS BARRY								
Fiscal Year	2007	2008	2009	2010	2011	2012	2013	2014
Scenario	Post Avail	Deployment	Post Avail	Deployment	Deployment	Post Avail	Deployment	Post Avail
Hull Threshold	0.62	0.8	0.62	0.62	0.8	0.62	0.8	0.62
Predictive MFOM	0.87	0.88	0.86	0.88	0.86	0.86	0.86	0.8
Rec MFOM	0.97	0.88	0.97	0.88	0.86	0.98	0.86	0.97
Funded MFOM	0.97	0.88	0.97	0.88	0.86	0.98	0.86	0.97
Recommended	8,405.15 K\$	0.00 K\$	8,047.74 K\$	0.00 K\$	0.00 K\$	1,249.26 K\$	0.00 K\$	8,771.84 K\$
Funded	8,405.15 K\$	0.00 K\$	8,047.74 K\$	0.00 K\$	0.00 K\$	1,249.26 K\$	0.00 K\$	8,771.84 K\$
Avail		SRA				DSRA		SRA
Items		207	261			129		276
Mdays		15900	15538			2134		16418
Material		1,642.98 K\$	1,569.81 K\$			313.48 K\$		1,569.11 K\$
Total		8,405.15 K\$	8,047.74 K\$			1,249.26 K\$		8,771.84 K\$

DDG 53: USS JOHN PAUL JONES								
Fiscal Year	2007	2008	2009	2010	2011	2012	2013	2014
Scenario	Deployment	Post Avail	Deployment	Post Avail	Deployment	Post Avail	Deployment	Deployment
Hull Threshold	0.8	0.63	0.8	0.63	0.8	0.63	0.8	0.8
Predictive MFOM	0.87	0.86	0.89	0.87	0.87	0.87	0.9	0.85
Rec MFOM	0.87	0.96	0.89	0.96	0.87	0.96	0.9	0.85
Funded MFOM	0.87	0.94	0.88	0.87	0.87	0.97	0.9	0.85
Recommended	0.00 K\$	8,126.83 K\$	0.00 K\$	8,844.05 K\$	0.00 K\$	8,447.65 K\$	0.00 K\$	0.00 K\$
Funded	0.00 K\$	8,081.17 K\$	0.00 K\$	8,992.95 K\$	0.00 K\$	8,528.94 K\$	0.00 K\$	0.00 K\$
Avail		SRA		EDSRA		ESRA		
Items		177	45			223		
Mdays		14950	1995			14902		
Material		1,554.08 K\$	101.62 K\$			1,582.77 K\$		
Total		7,961.55 K\$	992.95 K\$			8,529.94 K\$		

DDG 54: USS CURTIS WILBUR								
Fiscal Year	2007	2008	2009	2010	2011	2012	2013	2014
Scenario	Deployment	Post Avail	Post Avail	Deployment	Post Avail	Post Avail	Post Avail	Deployment
Hull Threshold	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Predictive MFOM	0.86	0.85	0.91	0.89	0.87	0.91	0.89	0.91
Rec MFOM	0.86	0.99	0.99	0.89	0.99	0.99	0.99	0.91
Funded MFOM	0.86	0.99	0.99	0.89	0.99	0.99	0.99	0.91
Recommended	0.00 K\$	10,070.08 K\$	7,723.76 K\$	0.00 K\$	7,739.30 K\$	7,722.92 K\$	7,741.48 K\$	0.00 K\$
Funded	0.00 K\$	10,070.08 K\$	7,723.76 K\$	0.00 K\$	7,739.30 K\$	7,722.92 K\$	7,741.48 K\$	0.00 K\$
Avail		DSRA	SRA		SRA	SRA	SRA	
Items		184	143		163	139	163	
Mdays		19130	14667		14704	14665	14708	
Material		1,995.79 K\$	1,563.19 K\$		1,563.19 K\$	1,563.19 K\$	1,563.69 K\$	

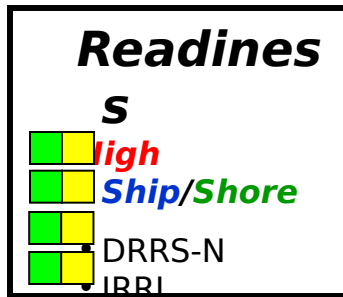
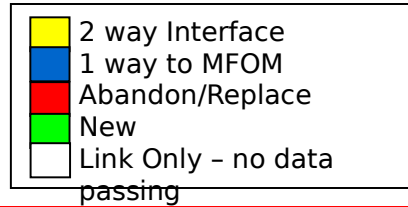


Decision Process

- **Starting with FY-08, notionally cut or add man-days to availabilities to accomplish appropriate readiness values**
 - Center FDNF and deployers readiness values around 0.8 readiness
 - Center non-deployers readiness values around 0.7 readiness
- **End-result of fiscal year calculations will provide for a net positive or negative requirement of notional man-days for class availabilities**
- **Repeat the process for each fiscal year through FY-13**
 - Data available by class and availability type
- **End-result of process calculations provides for a net positive or net negative requirement of notional man-days for class availabilities across the FYDP**
- **Process repeated for each surface ship class**
 - If positive, will have man-days to return to an individual FY budget
 - If negative, will build a back-log of required maintenance to keep ships at appropriate readiness level



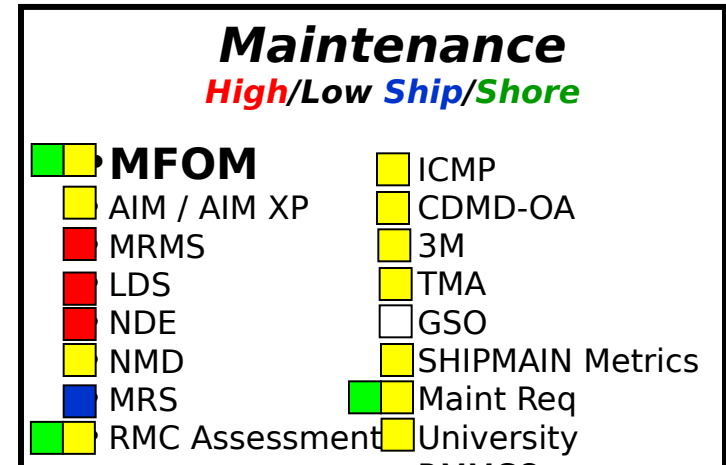
Readiness / Maintenance Interfaces



- IMS
- MFOM



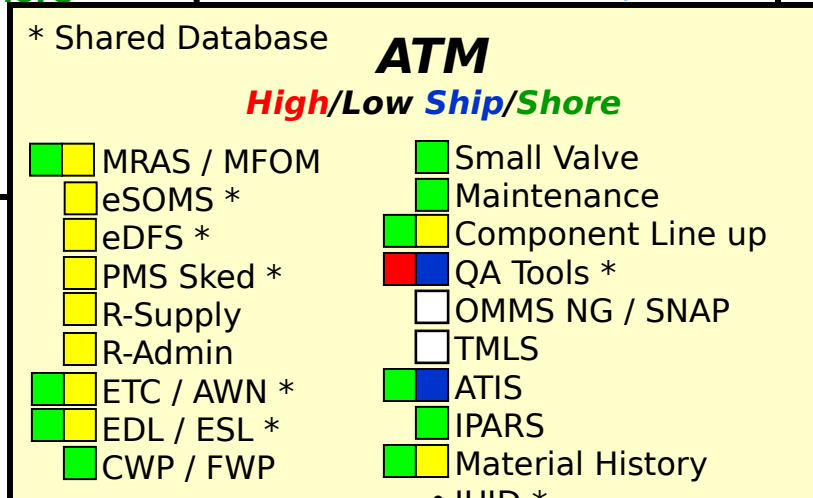
- Anchor Desk



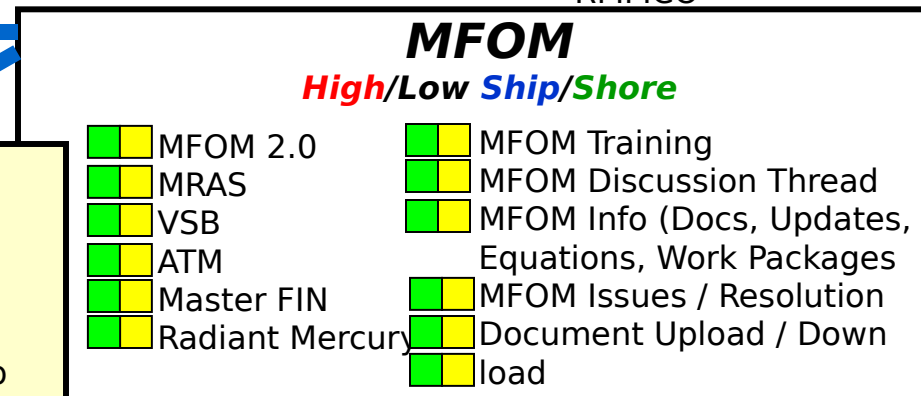
- RMMCO



- VSB
- RMAIS
- MAMS
- MST
- M&SWP



- IUID *



- Sub 2K Passage



FIN

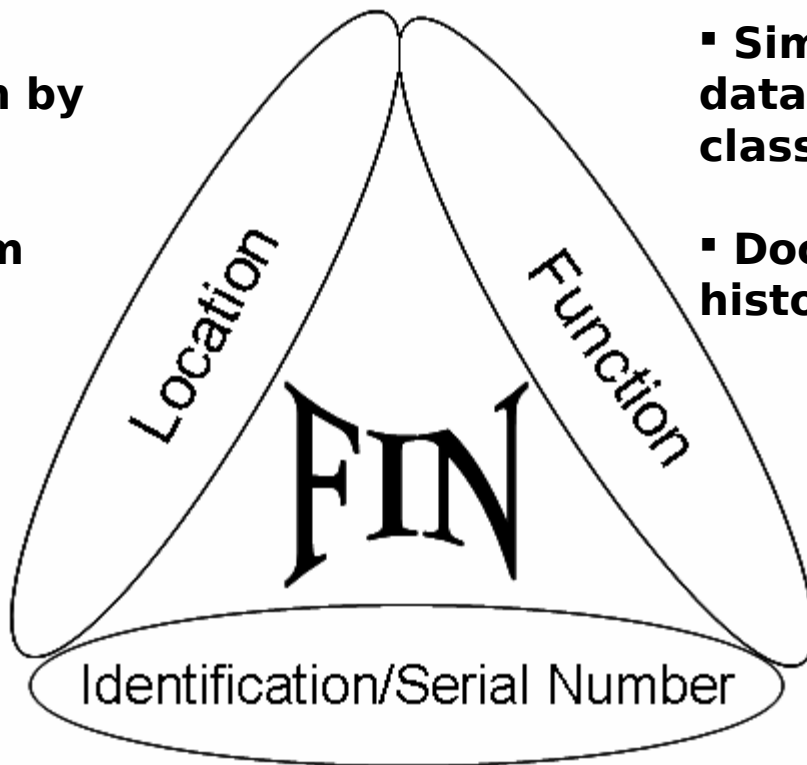
(Location)(Function)(ID)

Functional Index Number (FIN):

A alpha/numeric value assigned to all items in the model.

- **Uniquely identifies every shipboard item by function**
- **Identifies same item across ship classes**

- **Simplifies retrieving data across ship classes**
- **Documents material history**



Location:

Compartment Number, Compartment Name, or XYZ Coordinates

Function:

Defines the operational contribution, action, purpose or activity of an object.

Identification/Serial Number:

Applies an Item Unique Identifier to an object.

Can be composed of an IUID or Material

Identification Number

Operational Readiness, Effectiveness, Primacy



IUID DDG 51 Pilot Project Overview

- **MFOM 2.0 implemented a pilot project integrating IUID technology**
 - **Uses MRAS shipboard database**
 - **Effort focused on DDG-51 class**
 - **Pilot Ship USS FORREST SHERMAN (DDG-98)**
- **Targets items that will have maintenance performed on them during the course of a one year period through the tag out system.**
- **There were two major components involved in the pilot;**
 - **Determining the plan for uniquely identifying shipboard equipment and assets**
 - **Application of IUID technology to mark legacy equipment and assets and register IUID numbers in the DoD registry**
- **Marking takes place primarily at the organizational level during maintenance.**
- **MRAS and MFOM were modified to track equipment with an associated IUID.**



Project Schedule

- ✓ **By 31 January 2007:**
 - Determine procurement requirements for IUID marking technology
- ✓ **By 1 February 2007:**
 - Develop training curriculum and material for training Ship's Force
- ✓ **By 1 April 2007:**
 - Conduct Pre-Pilot testing at the NSWCCD-SSES to verify database communications
- ✓ **By 1 May 2007:**
 - Begin application of IUIDs on shipboard equipment
 - Conduct training for ship's force personnel
- ✓ **By 1 September 2007:**
 - Complete DDG 51 Class Pilot program IUID application
- ✓ **By 30 September 2007:**
 - Complete post DDG 51 Class Pilot program analysis and reporting



Project Schedule

- ✓ **Identify Construct # 1: Enterprise Identifier / Serial Number Requirements**

USFF UIC (DoDAAC) / Special Handling Indicator/Unique Random Serial Number

- ✓ **Develop and implement IUID Data processes and policy for DDG 51 legacy items:**
 - ✓ **Develop non-shipboard initial IUID SOP**
 - ✓ **Determine UID tag type and application/attachment process**
 - ✓ **Determine standard IUID reader requirements**
 - ✓ **Develop initial IUID SOP shipboard**
- ✓ **Initial Pre-Pilot project plan for testing of DDG 51 Class IUID Project at NSWCCD-SSES Philadelphia**
- ✓ **Identify approximate DDG 51 Class shipboard item inventory for Pilot IUID/MID labeling:**
 - ✓ **Project ship identified as USS FORREST SHERMAN DDG 98**
 - ✓ **ESOMS inventory identified**
 - ✓ **Commence shipboard pilot. ESD 23 April 2007**



Ships with IUID implementation



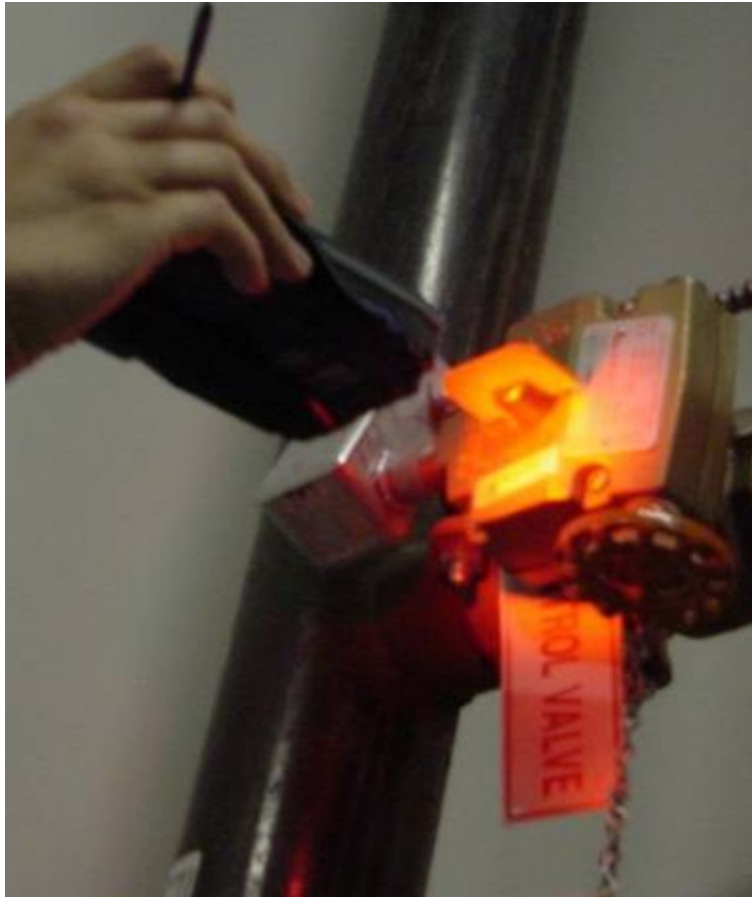
IUID Tag



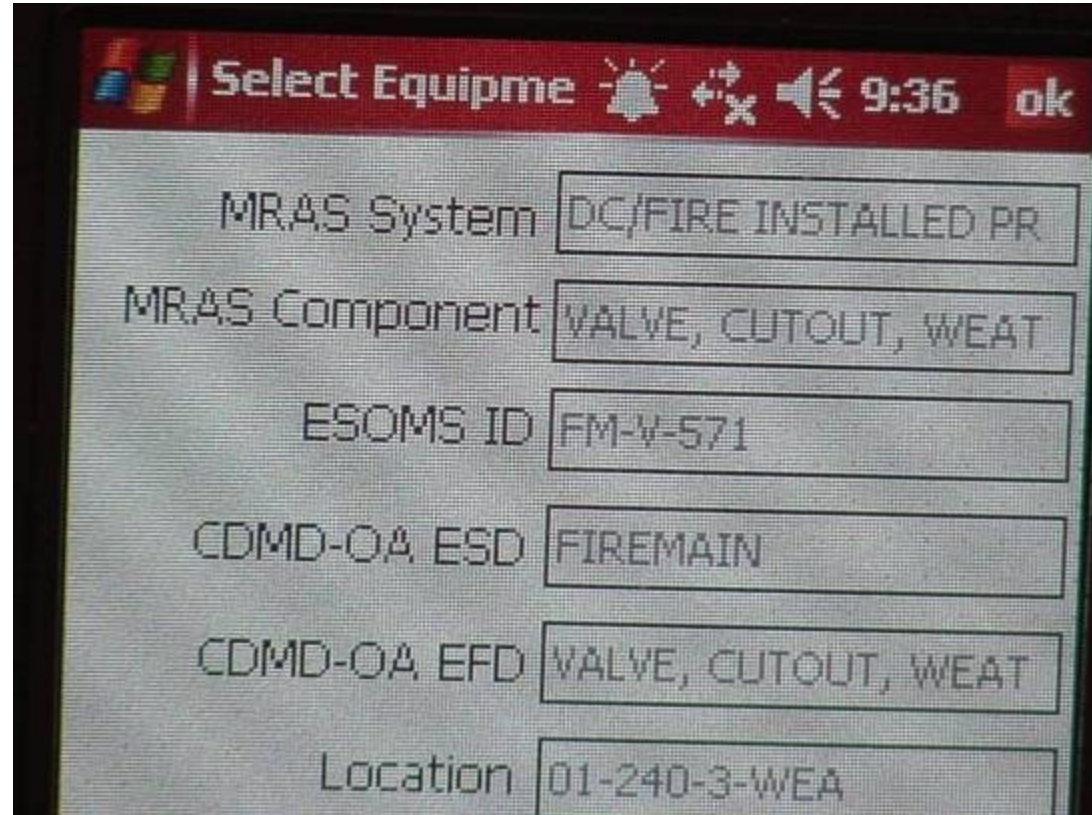
IUID Tag on Valve



Scanning with *IUID* tags



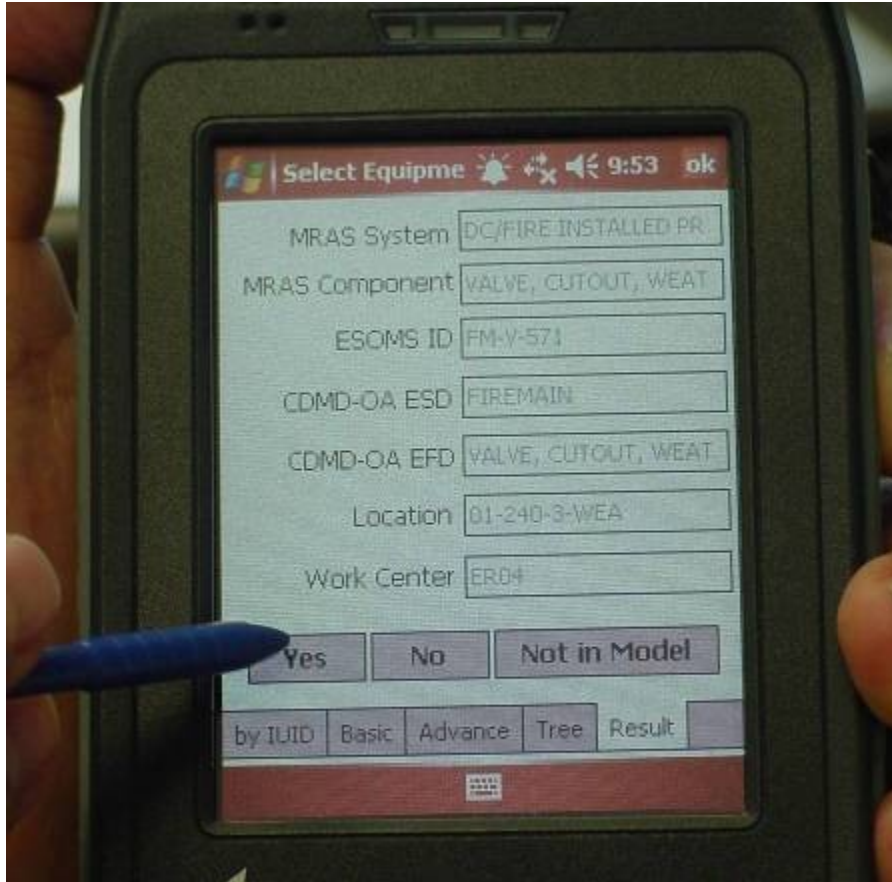
Scanning



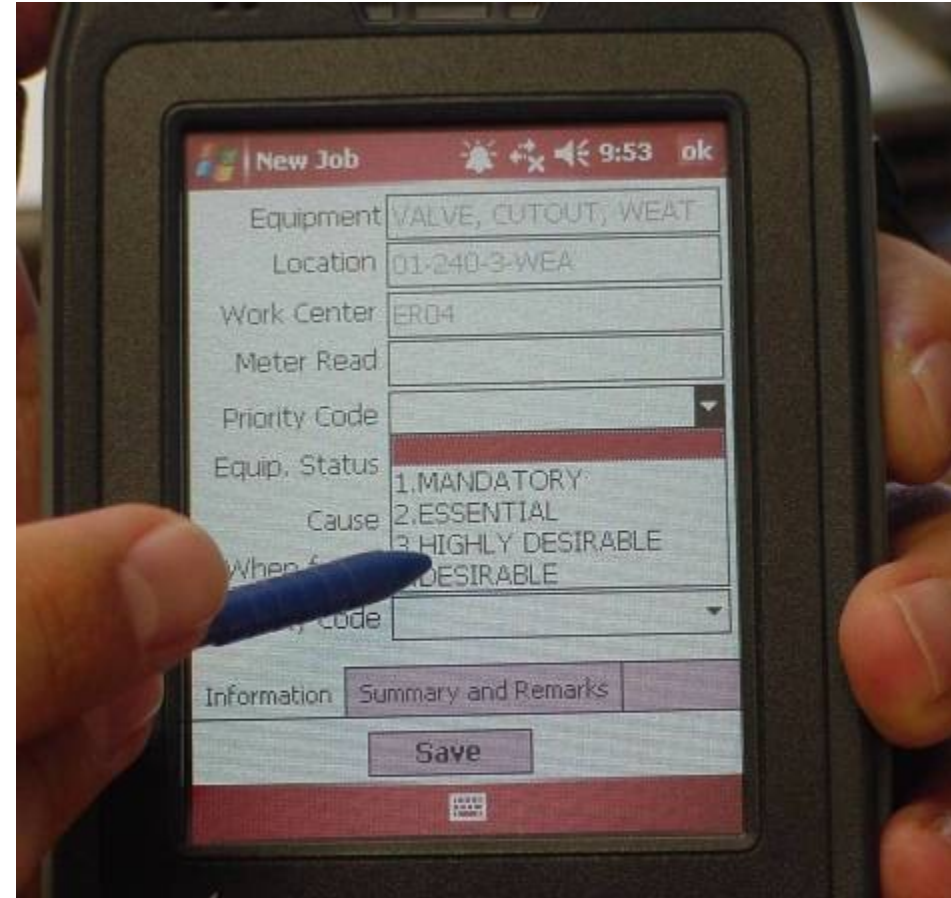
Results of Scan



Handheld Job Creation



**Confirming
Equipment**



Creating Job



AWN in Stand Alone mode

AWN Sign in - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites

Address http://localhost:1102/ffc2/default.aspx Go Links

Google G Go Bookmarks 0 blocked Check AutoLink AutoFill Send to Settings

DDG 102 Super Trial | Change Password | Log Out user1

Automated Work Notification

Home Create New View / Edit Reports Help Admin

Current inspection is DDG 102 Super Trial [Change Inspection](#)

[View CSMP](#)

My Cards 15

Department	Star	Priority	Safety	Location	Equipment
AS	3	S		AN/ARR-75V4	SURVEILLANCE SYSTEMS AN/ARR-75V4 SQQ-89 SCSRADIO RECEIVER SET, SONAR BOUY 03-142-0-C
AS	3	S		AN/ARR-75V4	SURVEILLANCE SYSTEMS AN/ARR-75V4 SQQ-89 SCSRADIO RECEIVER SET, SONAR BOUY 03-142-0-C
AS	3	S		AN/ARR-75V4	SURVEILLANCE SYSTEMS AN/ARR-75V4 SQQ-89 SCSRADIO RECEIVER SET, SONAR BOUY 03-142-0-C
AS	1			BOX, JUNCTION, ELEC, SON	SURVEILLANCE SYSTEMS BOX, JUNCTION, ELEC, SONAR ALM, SAF&WRN SYBOX, JUNCTION, ELEC, SONAR 0.5-28-0-Q
AS	1			BOX, JUNCTION, ELEC, SON	SURVEILLANCE SYSTEMS BOX, JUNCTION, ELEC, SONAR ALM, SAF&WRN SYBOX, JUNCTION, ELEC, SONAR 0.5-28-0-Q
AS	1			BOX, JUNCTION, ELEC, SON	SURVEILLANCE SYSTEMS BOX, JUNCTION, ELEC, SONAR ALM, SAF&WRN SYBOX, JUNCTION, ELEC, SONAR 0.5-28-0-Q
AS	2			AN/ARR-75V4	SURVEILLANCE SYSTEMS AN/ARR-75V4 SQQ-89 SCSRADIO RECEIVER SET, SONAR BOUY 03-142-0-C

Local intranet



AWN Maintenance Mode EOC values

Confirmation - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Reload Home Search Favorites MyStuff Zoom News Shopping

Address http://ftctestng.igsl.net/confirmation.aspx?linkkey=27563721

Search Web Highlight MyStuff Zoom News Shopping

Google

DDG-995CME | Change Password | Log Out user

Automated Work Notification

Home Create New View / Edit Reports Help Admin

Equipment: ALM, SAF&WRN BY BOX, TERMINAL, E-PN-50
Location: 0.5 28 0 Q
Work Center: CA01
Meter Reading:
Priority Code: 4 - DESIRABLE
Equipment Status: 1 - OPERATIONAL
EOC Values: 0.7 - Minor problems
Cause of Failure:
When Discovered Code:
Safety Code: 3 - MODERATE SAFETY C
Summary:
Remarks:

EOC Values

EOC Value	Description
1.0	Fully operable: System or equipment capable of performing all required functions with only cosmetic discrepancies.
0.9	
0.8	
0.7	
0.6	
0.5	
0.4	
0.3	
0.2	
0.1	
0.0	



ATM

Afloat Toolbox 4 Maintenance



Purpose of the ATM

- **Strategic Goals**
 - **Better data for MFOM/MRAS**
 - Improved 2K / Notification accuracy (correct equipment identified, symptom/EOC captured)
 - Non-2K impacts to readiness captured (Tag outs and Not completed PMS)
 - **Reduce the burden on the sailor for managing and performing maintenance**
 - Provides ship's force with a single entry portal for maintenance management
 - Improves visibility to the maintenance plan (CSMP, EDL, the Chief's wheel book)



ATM Drawers

- **Mission Readiness Assessment System (MFOM Afloat)**
- **IUID**
- **E-Forms (EDFS)**
- **ESOMS**
- **PMS SKED**
- **AWN & ETC**
- **EDL/ESL Trouble Call Manager)**
- **VSF (for Shore Maintenance Team)**
- **Component Line Up**
- **CWP / FWP**
- **LMAIS**
- **Material History**
- **Reports**
- **Small Valve Maintenance**
- **MRAS Training**
- **IPARS**
- **Handheld Updates**
- **Global Distance Support Help Desk**
- **ATIS**
- **CDMD-OA**
- **R-Supply**
- **R-Admin**
- **MFOM Shore**
- **Navy Maintenance Data**
- **Navy Data Environment**
- **RMMCO**
- **TMLS**
- **OMMS-NG**
- **QA Toolkit**
- **Vibration Analysis**

Phase I Oct 07

Phase II Jul 08



ATM Login

AFLOAT Toolbox for Maintenance



ATM ID:

Password:

Change password after Login: ☐

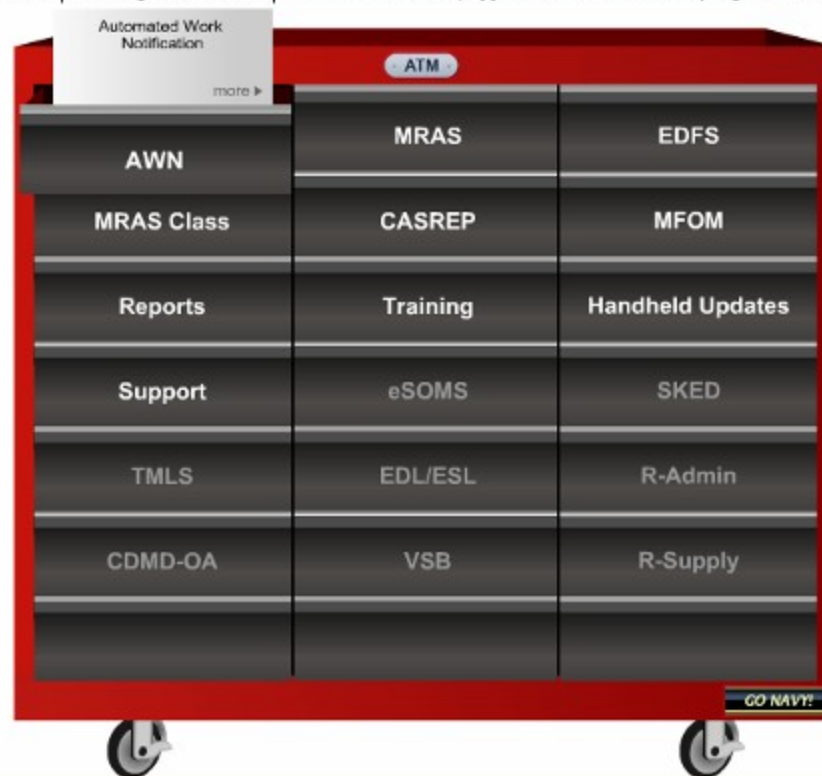
ATM Login



ATM Interface

AFLOAT Toolbox for Maintenance

Toolbox | User Login Passwords | User Administration | Application Administration | Log Out - LEEKER



Drawer Opens To Launch Application



Electronic Departure From Specs

Address <https://hammer.manitech-secs.com/edfs/default.aspx>

/edfs/PDFdisplay.aspx

Departure From Specifications

DFS QUEUE CREATE NEW DFS FORM USER MANUAL ACCOUNT SETTINGS USER ADMINISTRATION LOG OUT

SELECT DEPARTURE FROM SPECIFICATION REQUEST

Filter results by: All Search: []

	DFS	JCN	Description	Status	Date	QA12A Date
Options	FFG 52-10001-2007	EM011853	#1 Potable Water Pump / #1 MMR	QA12 Submitted	2007/06/04	
Options		937654	Windshield	QA12 Incomplete	2007/05/25	
Options	FFG 52-10000-2007	888888	Control Panel	QA12 Submitted	2007/05/04	

Create New DFS

DFS Listing Shipboard

Address <https://hammer.manitech-secs.com/edfs/QA12Wizord.aspx>

Departure From Specifications

DFS QUEUE CREATE NEW DFS FORM USER MANUAL ACCOUNT SETTINGS USER ADMINISTRATION LOG OUT

* = INDICATES REQUIRED FIELD
* USE PROVIDED NAVIGATION NOT THE BROWSER'S BACK BUTTON

1. DEPARTURE NUMBER: AUTO FILL BY SYSTEM

*2. SHIP: USS CARR (FFG 52)

*3. JCN: []

4. CWP SER NUMBER: []

*5. DATE: 2007/06/04

*6. ORIGINATOR NAME: Rick Leeker

Next Cancel

DFS Submissions from Ship

Would like a copy for your records.

DEPARTURE FROM SPECIFICATION REQUEST
QA FORM 12
COMULTORCOMBINT 4790.1 REV A CH-4

1. DEPARTURE NO. FFG 52-10001-2007	2. SHIP USS CARR (FFG 52)	3. JCN 888888	4. CWP SER. NO.	5. DATE 5/24/2007
---------------------------------------	------------------------------	------------------	-----------------	----------------------

6. ORIGINATOR NAME
ManTech Wilson

7. DEPARTURE TYPE
☐ MAJOR ☒ MINOR ☐ SURSAFE ☐ SEC ☐ PAM ☐ SECC

8. ADDITIONAL CLASSIFICATION (SHIPYARD USE ONLY)
☒ WAIVER ☐ DEVIATION ☐ ESCR ☐ TVO ☐ FRADR

9. CONCURRENCES (REQUIRED FOR CONDITIONAL DFS)
☐ YES ☒ NO

9. SYSTEM COMPONENT LOCATION & SHORT DESCRIPTION
(Control Panel)

10. NAVSEA BRANCH PLAN NUMBER/PIEC NUMBER

11. REFERENCES
Control Panel Manual

12. APPLICABLE SPECIFICATION(S)
Should light up

13. SITUATION/USE CASE BY NON-COMPLIANCE
Doesn't light up

14. CHAUM/ITS/COMMUNICATION TEST CONDUCTED, AFFECTED SYSTEM(S)
Fx

15. DATE REQUESTED BY
5/24/2007

16. SUBMITTING ACTIVITY: TYPE OR PRINT NAME(S) SIGNATURE
ManTech Wilson

17. VIEW JCN NUMBER FOR CONDITIONAL DEPARTURES

18. DFS APPROVAL COMMENTS

19. APPROVED ☐ DISAPPROVED ☐ CONCUR, FORWARDED TO TYCOM LOCAL TECH AUTHORITY FOR ACTION
NAME SIGNATURE DATE

20. TYCOM ☐ APPROVED ☐ DISAPPROVED ☐ FORWARDED TO NAVSEA/NAVAIR/LOCAL TECH AUTHORITY FOR ACTION
NAME SIGNATURE DATE

21. LOCAL TECHNICAL AUTHORITY ☐ APPROVED ☐ DISAPPROVED ☐ FORWARDED TO NAVSEA/NAVAIR FOR ACTION
NAME SIGNATURE DATE

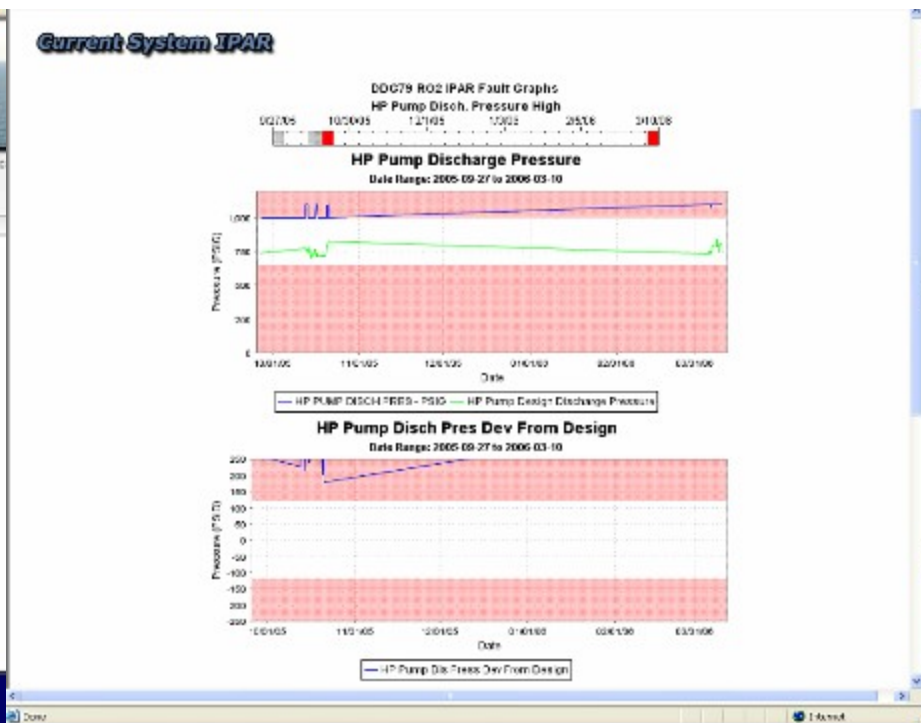
22. NAVSEA/NAVAIR ☐ APPROVED ☐ DISAPPROVED ☐ TEMPORARY ☐ PERMANENT ☐ PRECEDENT
NAME SIGNATURE DATE

19. COPY TO

Individual DFS Viewing



IPAR Integration



**Stoplight
Equipment
Representation**

**ICAS Equipment
Data**





Software Screenshots



SHIP MODEL UPDATE NEWS

SECURITY
LEVEL
UNCLASSIFIED

HELP DESK

WELCOME

LOGIN

User ID:

Password:

Login

Reset

NEW USER ACCOUNT

Request

mFOM

Maintenance Figure of Merit (MFOM) is an index value that measures the material condition component of ship's readiness. mFOM 2.0 utilizes Ship's Material Condition Maintenance (SMCM) models for all Surface Navy equipment and ships.


These models, along with a mathematical algorithm, will provide a numerical value indicating the ship's ability to perform its mission, based on its material condition. By tracking a ship's material condition, mFOM will allow maintenance managers to meet the surge deployment goals of the Fleet Response Plan (FRP) and will assist in allocating resources based on a ship's expected operational deployment; the "right" maintenance at the "right" time.



FEEDBACK

Please provide feedback on technical issues and website content to:

Mr. David Grefe, NSWC, Corona, <david.grefe@navy.mil>



version 2.1.3

MFOM

RIGHT MAINTENANCE. RIGHT TIME. RIGHT COST.

SHIP MODEL UPDATE NEWS

SECURITY LEVEL
UNCLASSIFIED

MY PROFILE : HELP DESK : FAQs : UTILITIES : SEARCH : LOGOUT : ADMINISTRATOR SCREEN

Maintenance Team Tools ▶ [Current Status mFOM-e](#) | [Availability](#) | [Screen Work](#) | [Availability Impact](#) | [Financial](#)

VST

PLVG

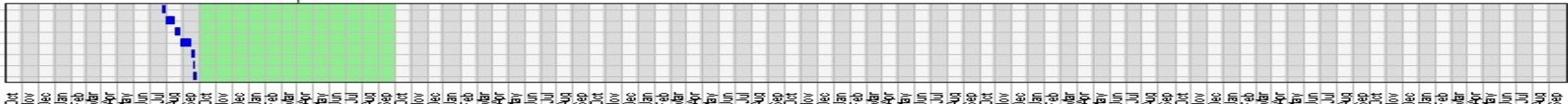
VVR

EXER


PLG

XSIT

XSIT



Hull: Scenario: Data Processed: **200/246**

Employment: **07/08/2009**  Model Date: **10/18/2005** Data Update: **10/20/2005**

USS MCCAMPBELL (DDG 85)

Index By Warfare Area:

Warfare Area Description	ASU	INT	MOB	AAW	AMW	ASW	STW	BMD	C2W	CCC	FSO	NCO	MIW	HULL's
Threshold	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.70	0.70	0.70	0.60	0.33	0.73 threshold
Index	0.50	0.51	0.33	0.50	0.35	0.38	0.44	0.52	0.50	0.51	0.45	0.48	0.34	0.45 mFOM

Service Details:

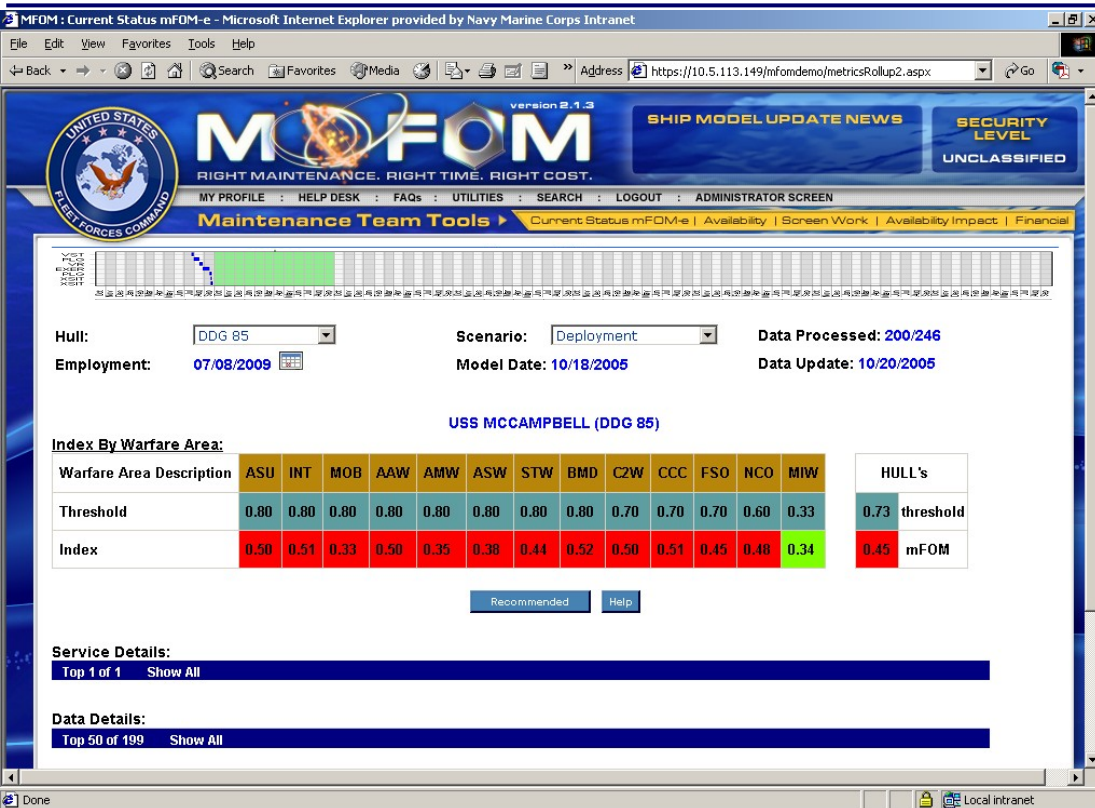
Top 1 of 1 [Show All](#)

Data Details:

Top 50 of 199 [Show All](#)



Ship's Material Condition Readiness



Scenario based material condition readiness

Work candidates impacting this mission

WAR	LINKED/ LIKE WORK	EFFECT	W.C.-JSN	EOC	NARRATIVE	AVAIL	REPAIR ACTIVITY	REC	mFOM-e	Incl	Excl
SU	166	0.61	EM020441	0.3		A123		N	0		
SU	163	0.66	EM020439	0.0	REMOVE AND REPLACE C SUMP	A123		N	11.04		
SU	167	0.78	PE040012	0.6	PROVIDE WAREHOUSE	A123		N	41.10		
SU	164	1.0	CF020267	0.0	TAO VDDS MONITOR FAILURE			N	52.58		
SU	165	0.67	CM020226	0.0	BAD MO DRIVE			N	61.19		
SU	130	0.89	EM020393	0.8	CORRODED DRIP PAN			N	75.90		
SU	62	0.92	EM020426	0.8	HOPM FLOW METERS OUT OF CAL			N	79.24		
SU	20	0.80	CO030076	0.0	NIGHT VISION HAS BROKEN KNOB			N	81.13		
SU	119	0.91	OT020072	0.8	MOVE DCC CUT-OUT SWITCH			N	82.25		
SU	42	0.87	CM020187	0.0	BAD POWER SUPPLY IN MCP			N	84.47		
SU	42	0.87	CM020207	0.6	FUSES			N	84.47		
SU	43	0.87	CM020195	0.0	DAMAGED DELUGE HOSE			N	84.47		
SU	43	0.87	CM020196	0.0	DAMAGED DELUGE HOSE			N	84.47		
SU	43	0.87	CM020197	0.0	DAMAGED DELUGE HOSE			N	84.47		
SU	44	0.87	CM020188	0.0	BAD POWER SUPPLY IN MCP			N	84.47		
SU	71	0.87	CM020234	0.0	TRANSFORMERS			N	84.47		
SU	135	0.87	CM020222	0.0	DAMAGED W29 CABLE ASSEMBLY			N	84.47		
SU	135	0.87	CM020192	0.6	DAMAGED DELUGE HOSE			N	84.47		
SU	141	0.87	CM020228	0.0	DAMAGED T3 AND T4 ON A3			N	84.47		
SU	144	0.87	CM020233	0.0	TRANSFORMERS			N	84.47		
SU	139	0.97	CM020224	0.8	IMA PERFORM 7211 R-26			N	84.47		
SU	140	0.97	CM020227	0.8	IMA PERFORM 7211 R-26			N	84.47		
SU	121	0.93	EM010350	0.6	PUMP CALIBRATION REQUIRED	B123		N	85.54		
SU	124	0.93	EM010352	0.8	POST DEPLOYMENT INSPECTION	B123		N	85.54		
SU	123	0.94	EM010351	0.6	CALIBRATION REQUIRED FOR SAGES	B123		N	86.51		
SU	126	0.96	EM040181	0.0	STRIPPED VALVE STEM	B123		N	89.47		
SU	1	0.94	CIO20324	0.0		B123		N	89.66		
SU	1	0.94	CIO20325	0.0	NO COMMS ON SWCS RADIO	B123		N	89.66		
SU	1	0.94	CSE10006	0.0	NO COMMS ON SWCS RADIO	B123		N	89.66		
SU	1	0.94	CIO20322	0.0	NO COMMS ON SWCS RADIO	B123		N	89.66		
SU	1	0.94	CSE10007	0.0	LOSS OF COMMS ON SWCS RADIO	B123		N	89.66		
SU	1	0.94	CSE10008	0.0	NO COMMS ON SWCS RADIO	B123		N	89.66		
SU	1	0.94	CIO20323	0.0	NO COMMS ON SWCS RADIOS	B123		N	89.66		
SU	1	0.94	CSE10009	0.0	NO COMMS ON SWCS RADIO	B123		N	89.66		
SU	1	0.94	CSE10010	0.0	NO COMMS ON SWCS RADIO	B123		N	89.66		
SU	90	0.90	EM010349	0.0	FAULTY DISCRET OUTPUT CARD			N	90.53		
SU	138	0.95	CSE10030	0.0	FAULTY SYNTHESIZER ON RCVR 2			N	90.80		
SU	6	0.99	OIO1R012	0.0	MISSING RED LIGHT AND PLACARD			N	91.47		
SU	125	0.97	EM010354	0.8	CORROSION CONTROL REQUIRED			N	91.99		
SU	45	0.97	EM020394	0.8	CORROSION CONTROL DOOR 2-262-2			N	92.04		
SU	132	0.93	CF020268	0.0	XSTAB 10 POWER FAILURE			N	92.24		
SU	74	0.96	CSE10004	0.0	BIT TEST FAILURE ON USC-55			N	92.34		



Stop Light Matrix

DDG 85

Add Column

Help

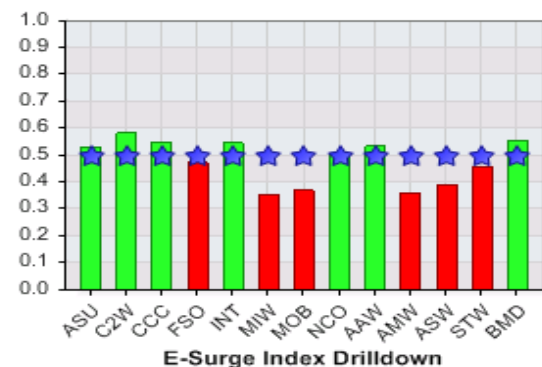
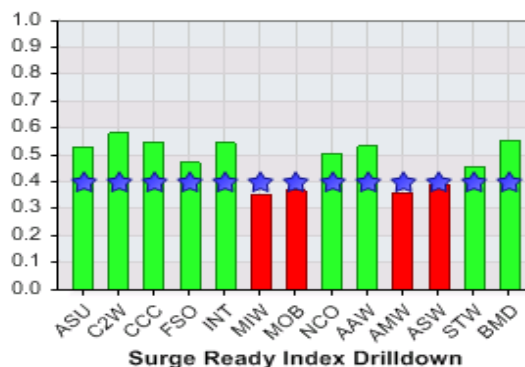
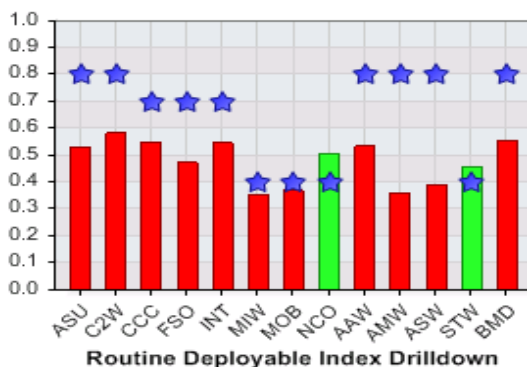
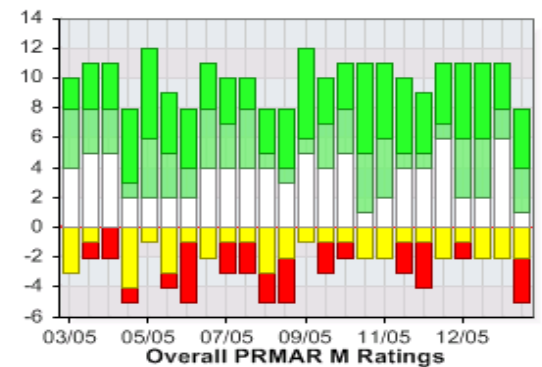
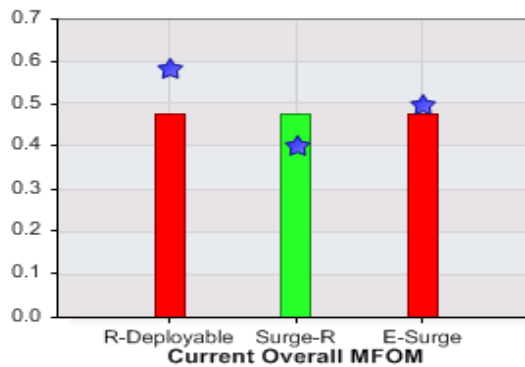
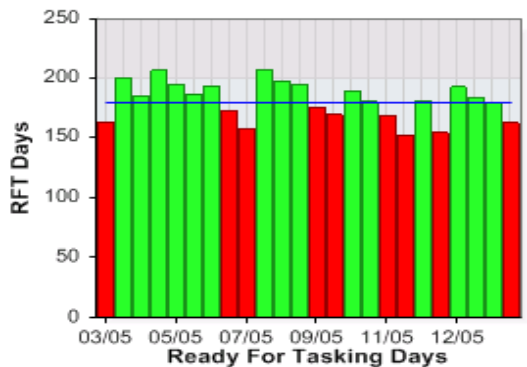
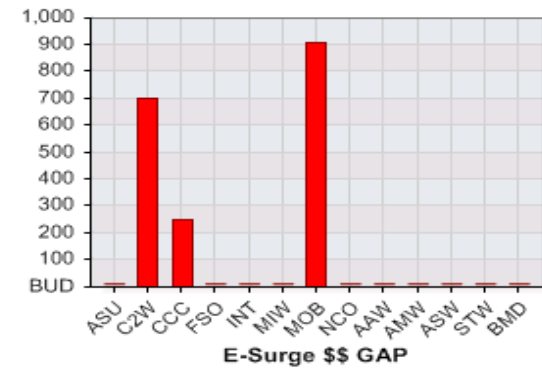
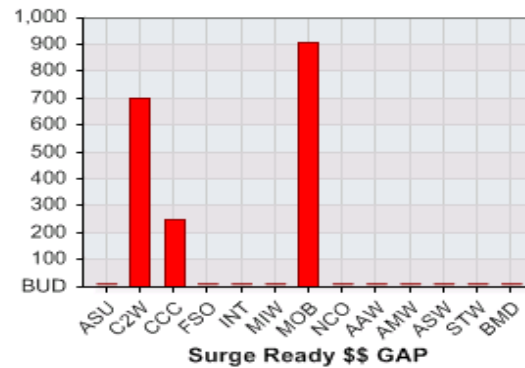
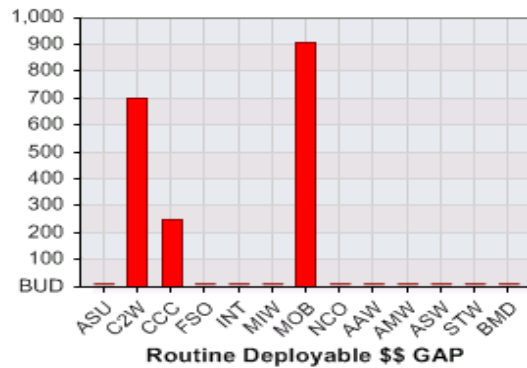
	Remove DDG 85	Remove DDG 85	Remove DDG 85	Remove DDG 85
Select scenario	Deployment	Drug Ops	Ammo On/Off Load	Training
Select Availability	current	current	current	current
mFOM value	0.53	0.53	0.53	0.53
AAW	0.55	0.55	0.55	0.55
AMW	0.46	0.46	0.46	0.46
ASU	0.55	0.55	0.55	0.55
ASW	0.47	0.47	0.47	0.47
BMD	0.57	0.57	0.57	0.57
C2W	0.61	0.61	0.61	0.61
CCC	0.57	0.57	0.57	0.57
FSO	0.54	0.54	0.54	0.54
INT	0.57	0.57	0.57	0.57
MIW	0.45	0.45	0.45	0.45
MOB	0.46	0.46	0.46	0.46
NCO	0.55	0.55	0.55	0.55
STW	0.51	0.51	0.51	0.51

Same ship
portrays
different
readiness for
different
missions

Different ships
can be
displayed at the
same time

Readiness
requirements
are set by
TYCOMs

Readiness
be





Static Index Matrix

Scenario:

	MFOM	ASU	C2W	CCC	FSO	INT	LOG	MIW	MOB	NCO
MCM 1	0.93	0.92	1.00	0.97	0.99	0.99	0.97	0.64	0.89	1.00
MCM 10	0.71	0.73	0.84	0.71	0.77	0.95	0.98	0.10	0.27	1.00
MCM 11	0.83	0.92	0.91	0.82	0.94	0.91	1.00	0.23	0.74	1.00
MCM 12	0.93	0.99	1.00	1.00	0.98	1.00	1.00	0.45	0.92	1.00
MCM 13	0.92	0.98	0.99	0.89	1.00	1.00	1.00	0.65	0.73	1.00
MCM 14	0.86	0.90	0.92	0.89	0.89	1.00	0.97	0.50	0.73	0.99
MCM 2	0.86	0.93	0.94	0.94	0.92	0.97	0.93	0.40	0.72	1.00
MCM 3	0.72	0.89	0.94	0.96	0.76	0.99	0.95	0.00	0.00	0.99
MCM 4	0.88	0.95	0.96	0.99	1.00	0.99	1.00	0.44	0.62	1.00
MCM 5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MCM 6	0.62	0.84	0.63	0.44	0.81	0.94	0.89	0.00	0.00	0.98
MCM 7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MCM 8	0.82	0.90	0.96	0.85	0.97	0.99	0.98	0.17	0.50	1.00
MCM 9	0.72	0.88	0.93	0.88	0.91	0.98	0.90	0.00	0.00	0.98



Model Structure

View Ship Model - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: m:\tools\11.20.16.C.10.4\mfm\mfmShipModel.aspx

m • FOM

Home

My Profile

Logout

PE Tools

Current Status mFOM-e

Availability

Screen Work

Availability Impact

mFOM-e

Financial

RMC Tools

Stop Light Matrix

Availability Impact

mFOM-p

Financial

FMO Tools

FMO Dashboard

FMO Parameters

Utilities

FIN Look Up

View Ship Model

Input 3M

Admin

Manage Users

Select Hull: MCM 5 Warfare Area: MCB Model Date: 14-AUG-04

	Impact	Index
DC	0.52	0.58
CTRL	0.00	0.00
PROP	0.00	0.41
HOB	0.38	0.93
MUM	0.63	0.49
DEP	0.90	0.93
PWR	0.00	0.63
DC	0.98	0.98
DC EQUIP	0.75	0.82
DC LOCKER	0.83	0.00
CLOSURES	0.83	1.00
DECON STATIONS	0.83	1.00
EEBD	0.83	1.00
LIST/TRIM INDIC	0.83	1.00
MAIN AND SECONDARY DRAIN	0.83	0.90
ABC	0.75	1.00
FF EQUIP	0.75	0.90
AFFF	0.80	1.00
APC	0.80	1.00
FIREMAIN	0.80	0.51
ZONE	0.75	1.00
ZONE 1	0.75	0.60
ZONE 2	0.75	0.00
ZONE 6	0.75	1.00
HALON	0.80	1.00
SPRINKLING	0.80	1.00
STRUCTURE	0.75	0.75
CSS	1.00	1.00

Colors and indenture show model levels

Column shows impact of individual equipment on this warfare area

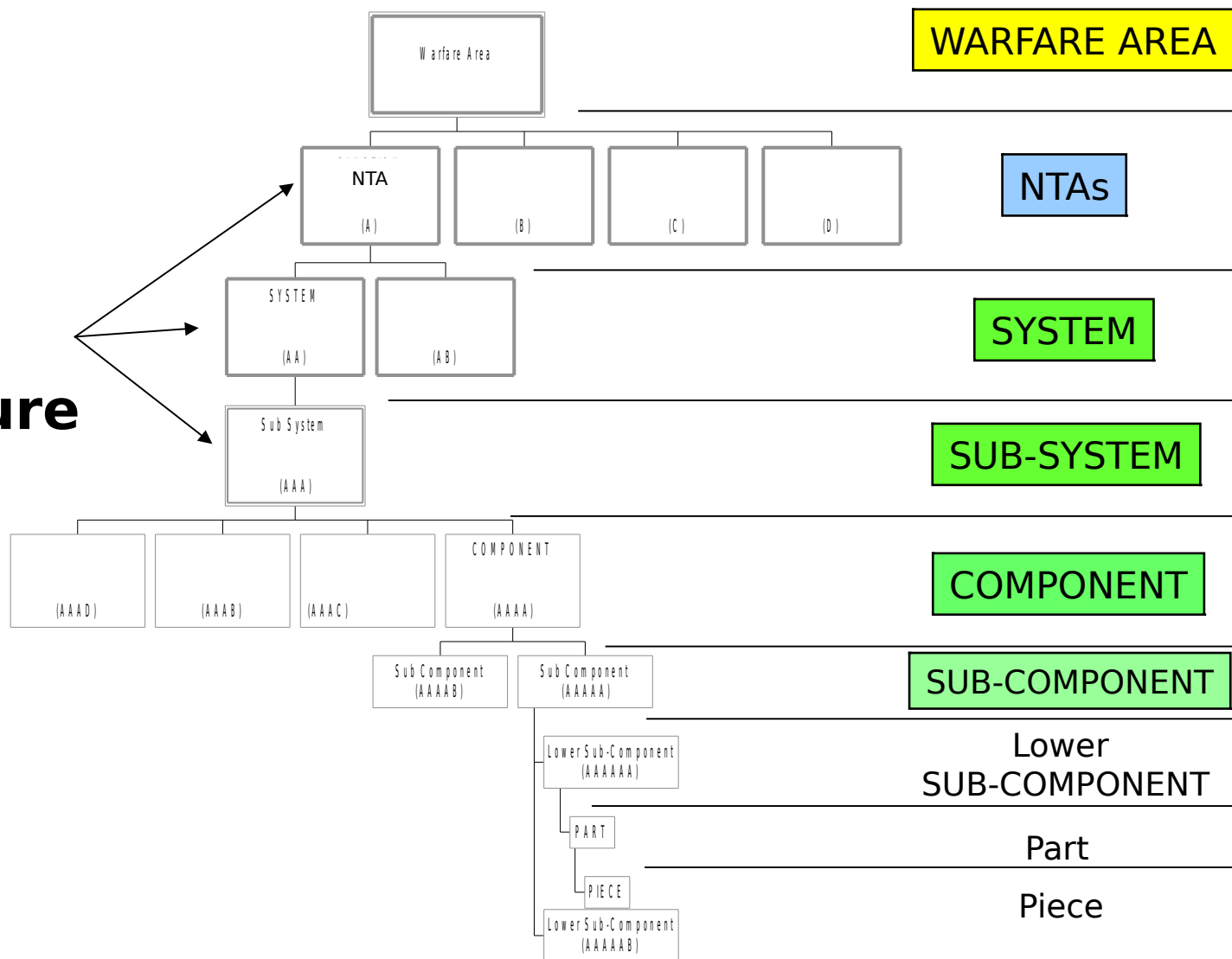
Column shows equipment degradation if



Analytical Hierarchical

Ship Material Condition Model Conventions

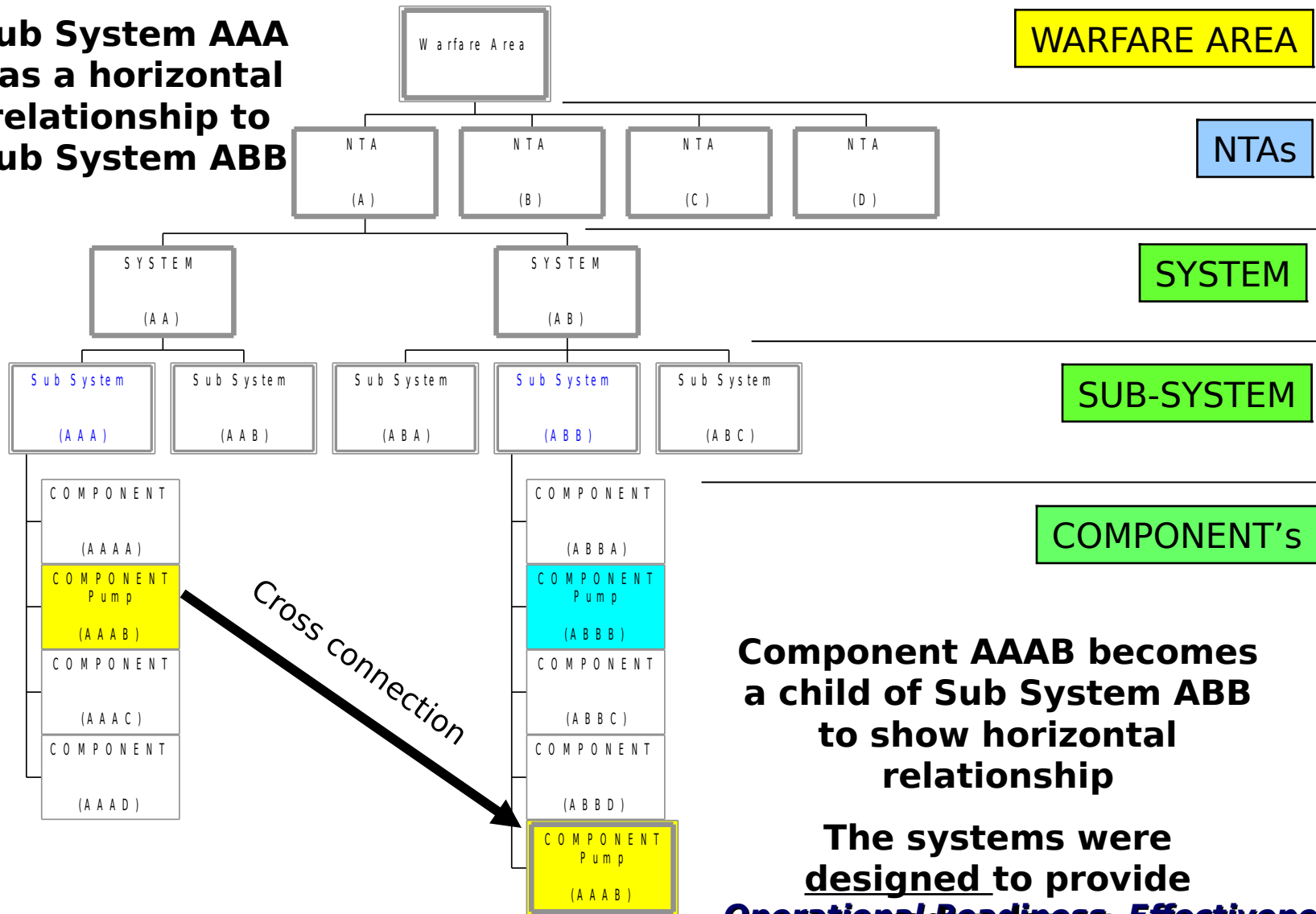
**Level
of
Indenture**





MFOM Horizontal Structure

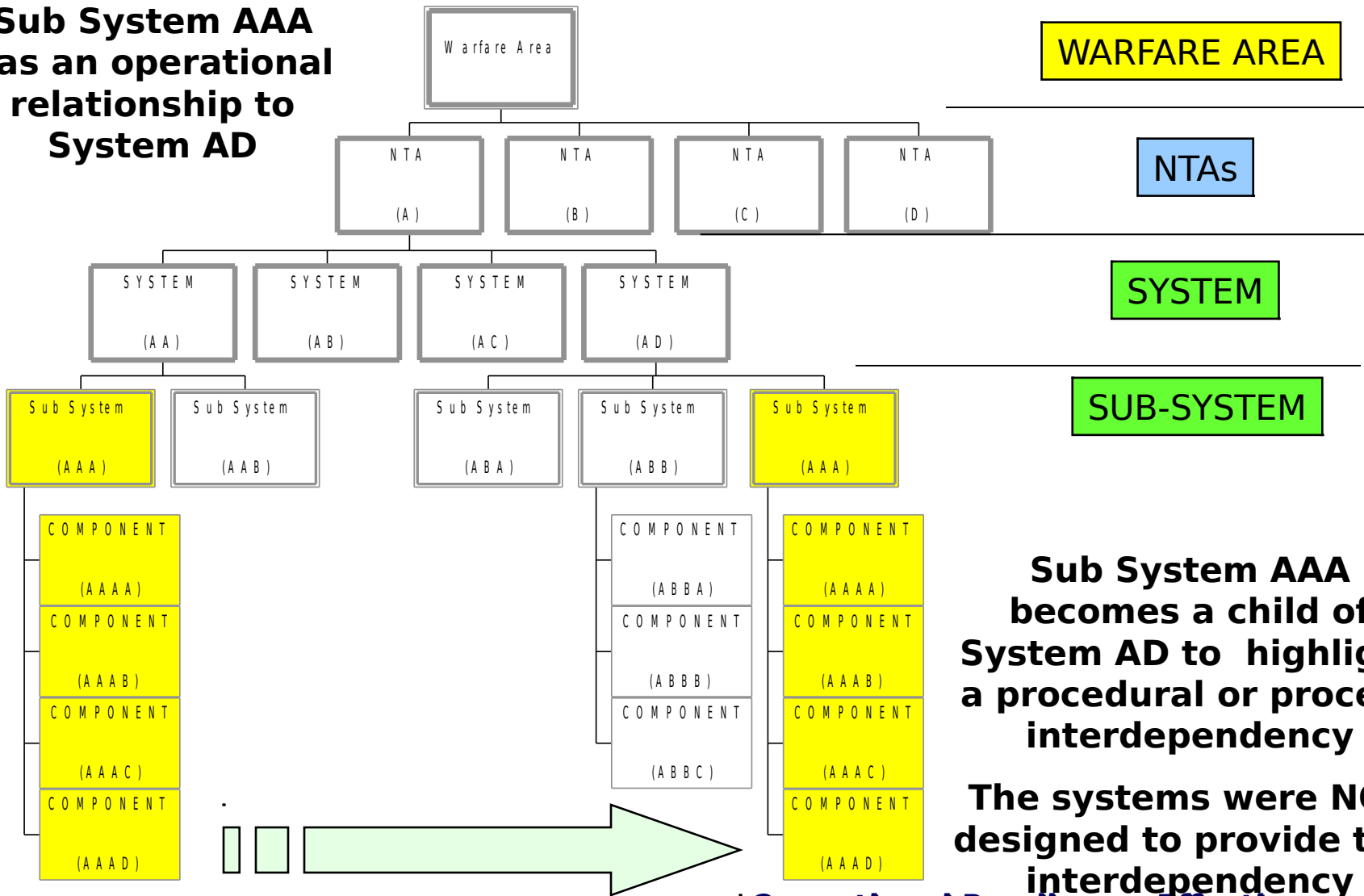
Sub System AAA has a horizontal relationship to Sub System ABB

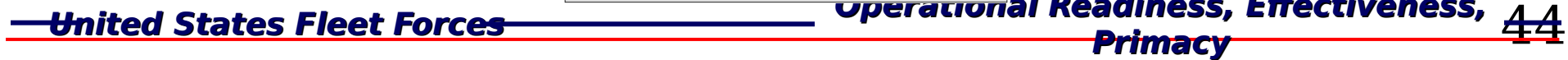




MFOM Operational Structure

Sub System AAA has an operational relationship to System AD







MFOM Roadmap

MFOM provides the Navy Maintenance community with a single, authoritative, centrally managed application that provides the necessary data upgrades and improvements to support readiness and maintenance reporting.

- MFOM is designed for easy incorporation into ERP.
- MFOM is the ship readiness feed for DRRS-N (equipment pillar)
 - MFOM will address readiness appropriate to the FRTP
- MFOM will be the primary waterfront maintenance tool for budgeting, organizing and planning (O, I & D level)
 - MFOM will associate detailed funding with appropriate maintenance actions
 - MFOM will improve the interaction between established maintenance tools to leverage necessary capabilities and functionalities.
 - MFOM will provide validation, screening and brokering (VSB) capability for building the maintenance work packages based on metrics.



What's being constructed

Classified
Unclassified

Inputs:

Interfaced Apps:

PMS SKED
eSOMS
eDFS
AWN (ETC)
R-SUPPLY
R-ADMIN
RAMIS
OMMS-NG
RMMCO

CASREPS

Interfaced Data:

Degradation
Curves
ICMP/CMP
CSMP
Cost data
EOC
WEBSKED
ICAS/IPARS

ALTS

MFOM

Models
Core Software
Equations
WT/Impacts
FIN
Scenario
NTAs
Screen/Broker
Afloat Portal

Outputs:

Ship Readiness
Class Readiness
Equip/System
Readiness
FRP Cost
Life Cycle Cost
Total Cost
Screening Value
Recommended
Repairs
Assessment Results
Predictive:
Readiness
Budget



SHIP MODEL UPDATE NEWS

SECURITY
LEVEL
UNCLASSIFIED

MY PROFILE : HELP DESK : FAQs : UTILITIES : SEARCH : LOGOUT : ADMINISTRATOR SCREEN

3/29/2007

Maintenance Team Tools ▶

Current Status MFOM-s | Availability | Screen Work | Availability Impact | Financial

BUSINESS SENSITIVE

MT Financial



Hull: DDG 85

Availability: 11

Scenario: Deployment

Employment: 03/04/2002

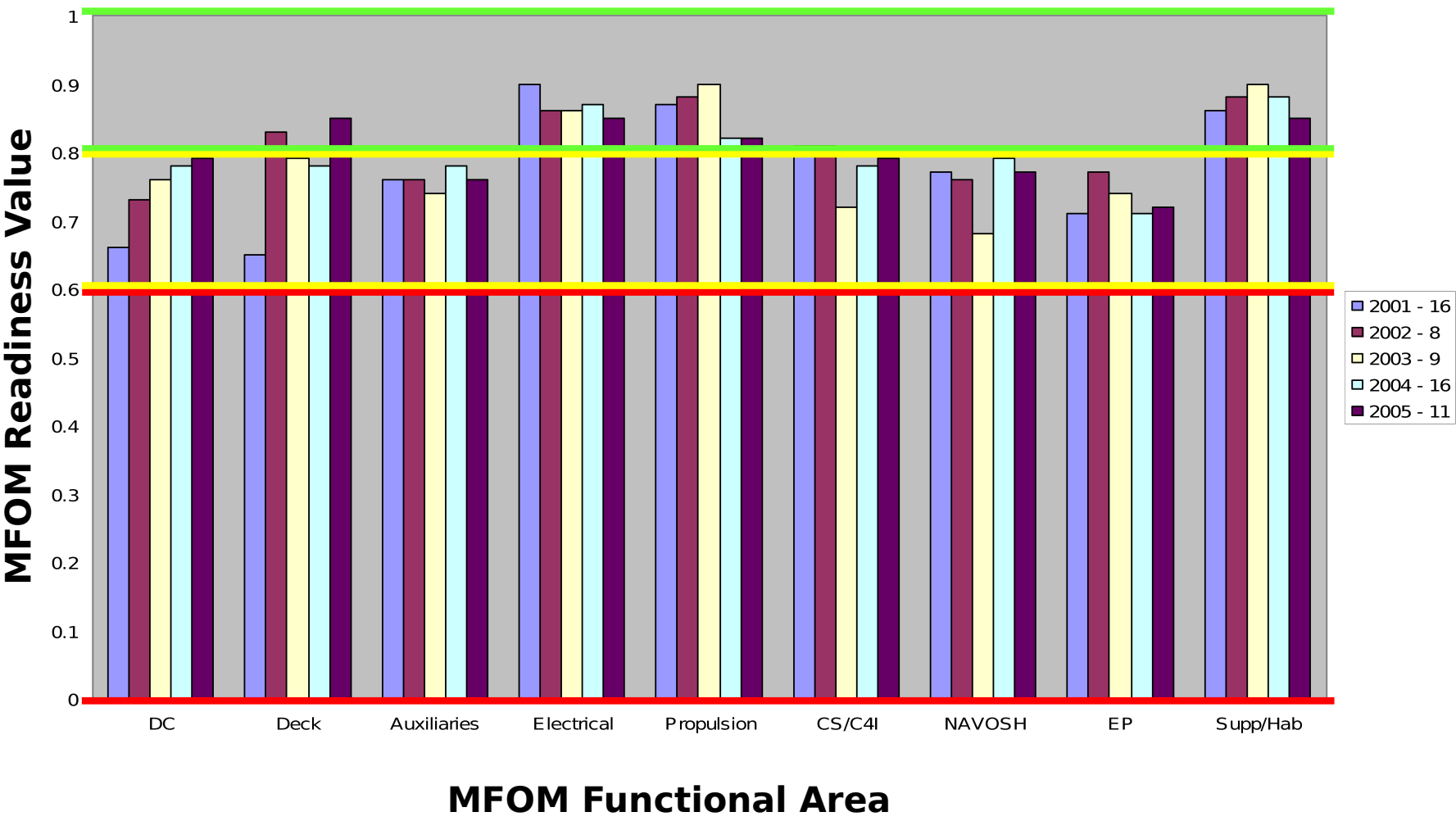
Model Date: 10/18/2005

Data Update: 03/13/2007

ESWBS	JOB	LINKED/ LIKE WORK	NARRATIVE	INDEX	AVAIL	REPAIR ACTMITY	mFOM	MD's	Total Budget Remaining	GFM Budget Remaining	NAVSEA Budget Remaining
									\$105,000.00	\$80,000.00	\$25,000.00
23311	EM011964	18	JW PUMP PRESS. LOW	0	A6A4	Activity 3	97.07	5	\$104,950.00		\$24,950.00
2331	EM011890	18	DEI DUE	0.8	A6A4	Activity 3	97.07	10	\$104,850.00		\$24,850.00
23311	EM011941	18	L/O LINE HAS SMALL HOLE	0.8	A6A4	Activity 3	97.07	5	\$104,800.00		\$24,800.00
23311	EM011943	18	CORE LEAKS	0.8	A6A4	Activity 3	97.07	5	\$104,750.00		\$24,750.00
23311	EM011978	18	O-RING WORN	0.8	A6A4	Activity 3	97.07	19	\$104,560.00		\$24,560.00
44151	OE011030	23	BAD K2 KEYLINE RELAY	0	A6A4	Activity 5	40	10	\$104,360.00		\$24,360.00
44151	OE011033	23	FAULTY TRANSMITTER MODULE	0	A6A4	Activity 4	40	5	\$104,260.00	\$79,900.00	
58311	DA01R005	25	TENSION SPRING CORRODED	1	A6A4	Activity 3	12.93	5	\$104,210.00		\$24,310.00
58311	DA01R006	25	DAVIT PAINT DETERIORATING	1	A6A4	Activity 3	12.93	5	\$104,160.00		\$24,260.00
58300	DA01R008	25	MISSING TAKE UP MARKS	1	A6A4	Activity 4	12.93	5	\$104,060.00	\$79,800.00	



INSURV MI Trends





Maintenance Planning in Predictive MFOM

Corrective Maintenance				Preventive Maintenance				Scheduled Alterations								
Total: 14.00 K\$																
ASU	INT	MOB	AAW	AMW	ASW	STW	BMD	C2W	CCC	FSO	NCO	MIW				
WAR	FIN	RIN	HSC	EQUIPMENT				CADATE	EFFECT	PRE	mFOM	MDAYS	MATERIAL	TOTAL		
ASU	570	7AV3R	5121125711	VALVE OPERATOR				11/12/2009	0	0.93	0.93	7	0.50 K\$	1.75 K\$		
ASU	572	7AV3T	5121125831	VALVE OPERATOR				02/10/2010	0	0.88	0.88	2	0.50 K\$	1.25 K\$		
ASU	1079	3050S	6541112C	FAN ROOM				06/28/2012	0	0.82	0.81	16	0.50 K\$	1.50 K\$		
ASU	772	7AWTD	5121223A1	FAN COIL ASSEMBLY 3-317-2				11/26/2012	0	0.73	0.73	40	0.50 K\$	1.25 K\$		
ASU	10	7EZMW	514112562	VALVE ASSEMBLY, ISOLATION, BRANCH RETURN				07/13/2015	0.18	0.94	0.76	46	0.50 K\$	1.25 K\$		
ASU	10	7EZMW	514112562	VALVE ASSEMBLY, ISOLATION, BRANCH RETURN				05/15/2055	0.18	0.94	0.76	27	0.50 K\$	1.25 K\$		
ASU	10	7EZMW	514112562	VALVE ASSEMBLY, ISOLATION, BRANCH RETURN				07/13/2015	0.18	0.94	0.76	46	0.50 K\$	1.25 K\$		
ASU	10	7EZMW	514112562	VALVE ASSEMBLY, ISOLATION, BRANCH RETURN				05/15/2055	0.18	0.94	0.76	27	0.50 K\$	1.25 K\$		
ASU	9	7EZDH	514113692	VALVE ASSEMBLY, ISOLATION, BRANCH RETURN				07/09/2010	0.18	0.89	0.73	44	0.50 K\$	1.75 K\$		
ASU	2	7AH4V	5141125A1	VALVE, ISOLATION, BRANCH SUPPLY				07/29/2012	0.18	0.80	0.65	22	0.50 K\$	1.50 K\$		
ASU	14735	7E84U	244114	PRPLN SHAFT BEARINGS STERN TUBE BRG				02/14/2009	0.48	0.84	0.43	14	0.50 K\$	1.75 K\$		
ASU	12807	7AC9P	555132DF	VALVE, SOLENOID OPERATED, AFFS SYSTEM				05/31/2010	0.56	0.80	0.35	9	0.50 K\$	1.50 K\$		
ASU	24044			TANK				11/16/2008	0.57	0.90	0.38	23	0.50 K\$	1.75 K\$		
ASU	23925	3057U	66511112	TEST LAB				12/17/2008	0.57	0.88	0.37	36	0.50 K\$	1.75 K\$		
ASU	14864			TANKS				04/20/2008	0.59	0.90	0.36	5	0.50 K\$	1.50 K\$		
ASU	15059	7CQDX	234111	GAS GENERATOR				06/18/2008	0.61	0.87	0.33	33	0.50 K\$	1.75 K\$		
ASU	27666		523011	POTABLE WATER SYSTEM				07/30/2008	0.70	0.73	0.21	30	0.50 K\$	1.25 K\$		
ASU	6139	7EW1L	16711514	DOOR, STRUCTURAL, 1-130-2				07/26/2007	0.72	0.93	0.25	13	0.50 K\$	1.25 K\$		
ASU	27668		523011	POTABLE WATER SYSTEM				11/21/2007	0.72	0.87	0.23	29	0.50 K\$	1.75 K\$		
ASU	8014	7EV2A	1681214H	DOOR, STRUCTURAL, 03-178-1				11/21/2007	0.73	0.87	0.23	12	0.50 K\$	1.50 K\$		
ASU	27655		523011	POTABLE WATER SYSTEM				04/29/2008	0.73	0.79	0.21	25	0.50 K\$	1.50 K\$		
ASU	11038	00BIE	5721216	ELECTRIC TRUCK				05/30/2008	0.74	0.77	0.20	38	0.50 K\$	1.75 K\$		
ASU	1111	7ACFZ	52911B4	VALVE, STOP, HOSE CONNECTION				02/25/2007	0.95	0.90	0.03	42	0.50 K\$	1.50 K\$		

• Predictive MFOM Work List

- Builds future availabilities based on VSB protocols
- Uses degradation curves to predict future failures
- Inputs known Class Maintenance Plan actions and Modernization in out years
- Uses projected Man-day rates

• Outputs

- Indicates predicted MFOM readiness value based on work list
- Links modernization to maintenance actions
- Estimates funding to achieve desired FRP readiness and Life Cycle readiness
- Provides information to port loading model and OPNAV campaign model

Operational Readiness, Effectiveness, Primacy



Readiness drill down

UNCLASSIFIED

Information Center

Feedback

Help

User Manual

References

My Profile

Logout

DRRS-N

Defense Readiness Reporting System - NAVY

Assessment

CNI

Status

Group Builder

Force Management

System Info

Pers Adhoc

-- Select a Group --

Unit Of Interest: CG 68 ANZIO (UNIT OF INTEREST)

Settings

InStaffing

Set View

Automatic

Save

Core Assessment

CDR

Computed

14-Apr-2006

14-Apr-2006

SORTSREPNAV Assessment

PER

EQP

SUP

TNG

ORD

CBO

C1

C2

C1

C1

C1

C2

Activity:

View

Print

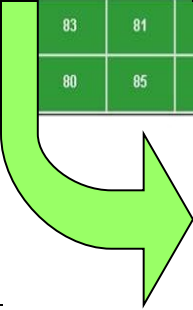
Last Assessed:

SUBMIT ALL

SUBMIT CHANGES

Capability	Date	CDR	Computed	P	E	S	T	O
AMW - Amphibious Warfare	14-Apr-2006	Q			79	85	80	90
Mission Essential Task	Title							
NTA 1.1.2.3.6	Conduct Flight Operations	14-Apr-2006	Y	85	80	60	88	95
NTA 1.2.1.2.1X	Conduct Air Space Management and Control	10-May-2006	Y		80	90	95	
NTA 1.2.7	Conduct Tactical Oceanographic Analysis	14-Apr-2006	Y		80	90	95	
NTA 3.1.5	Conduct Tactical Combat Assessment	14-Apr-2006	Q	73	75	83	84	50
NTA 3.2.2	Attack Enemy Land Targets	14-Apr-2006	Y	86	95	75	90	78
NTA 3.2.8	Conduct Fire Support	14-Apr-2006	Y	80	85	80	85	80
NTA 3.2.8.2	Illuminate/Designate Targets	14-Apr-2006	Y		92	96	95	
NTA 6.1.1.1	Protect Individuals and Systems	14-Apr-2006	Q	73	75	83	84	50
AAW - Anti-Air Warfare	14-Apr-2006	Y	82	83	91	82	90	84
ASW - Antisubmarine Warfare	14-Apr-2006	Y	80	8	83	81	83	
ASU - Antisurface Ship Warfare	14-Apr-2006	Y	87	8	80	85	80	

- Drill Down Capability
- Clicking on Equipment Pillar bubble brings up top five degraded systems degrading this capability on a ship
 - System Name, JSN, ETR, CSMP Summary are displayed



System Name Summary	JSN	ETR	CSMP
Chill Water Sys leaks	EM02-2231	3/09/06	# 2 CWP Seal
Anchor Windlass oil	EA01-1347	1/15/06	Debris in lube



Operational Performance

Values and Definition

Totally Inoperative: 0.0 - The system or equipment not capable of performing required functionality.
Example - when the power switch is turned on Nothing happens, no lights on the panel, nothing.

Inoperative: 0.2 or 0.1 - System or equipment not capable of performing intended functions using posted operating procedures

Major problems: 0.4 or 0.3 - System or equipment cannot perform one or more intended functions. Functions may be restricted by time, environmental or operational conditions

Fully operable: 1.0 - System or equipment capable of performing all required functions with only cosmetic discrepancies

Operable: 0.9 - System or equipment capable of performing all required functions with minor discrepancies

Minor problems: 0.8 or 0.7 System or equipment Functions when required without modification of operating instructions and procedures. Minor discrepancies are likely to impede function in the near term.

Limited capability: 0.6 or 0.5 - System or equipment is capable of performing intended functions, but not at full operational requirements, or not capable of performing required functions in all operating modes

